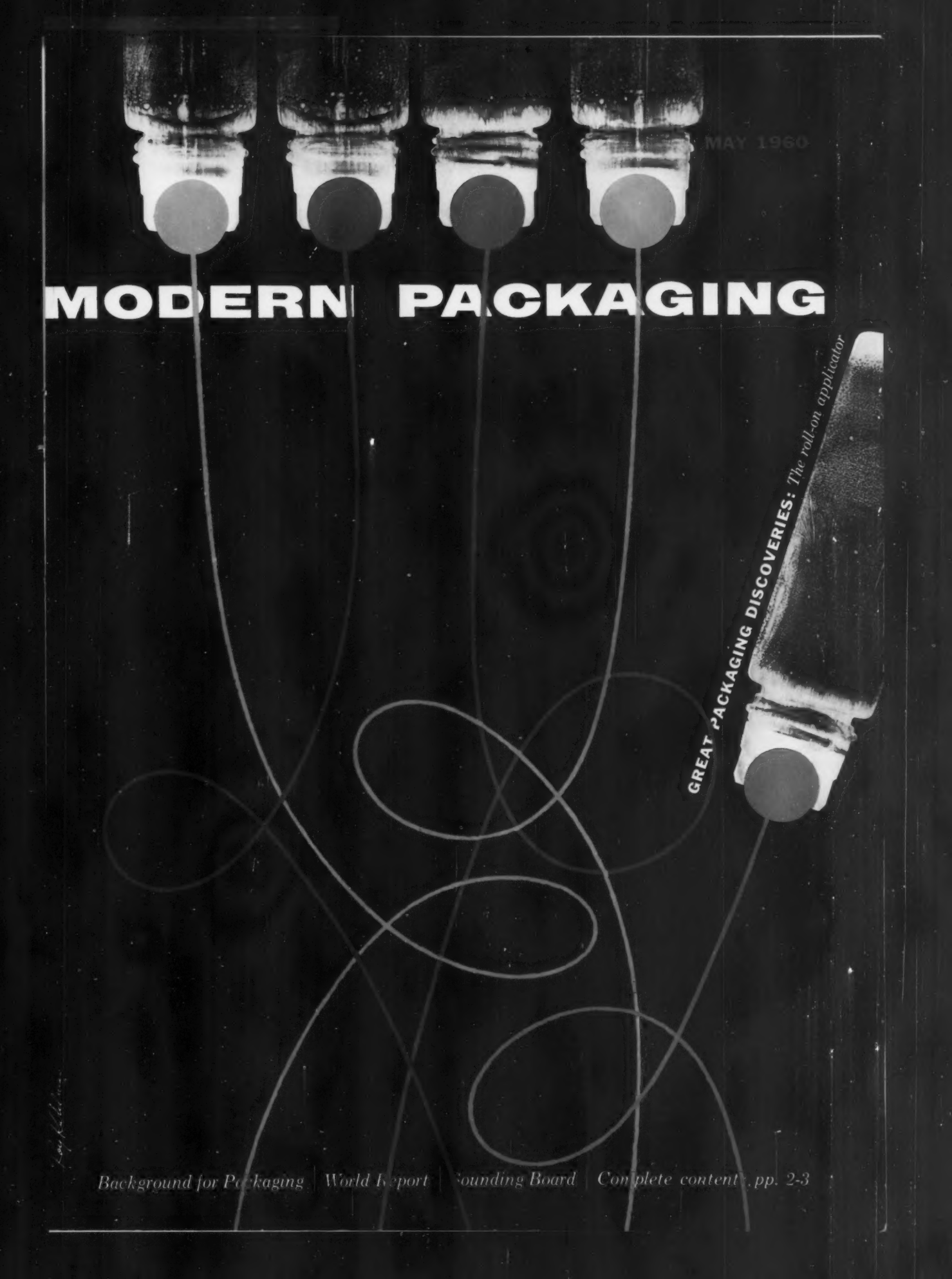


MAY 1960

MODERN PACKAGING

GREAT PACKAGING DISCOVERIES: *The roll-on applicator*

Background for Packaging | *World Report* | *Sounding Board* | *Complete contents, pp. 2-3*

Chemtite

CHEMICALLY MODIFIED LABELING ADHESIVE

NOW! CLEAN, FAST LABELING EVERYWHERE

CHEMTITE runs as clean as a thin bodied adhesive. Tacks as fast as a heavy bodied adhesive. Chemically combines the two types. Grips and machines the same in any climate, any season, any country.

CHEMTITE is fully iceproof and water resistant. No dripping from picker plates. No stringiness. Spreads evenly to a thin film at high speeds. Securely grips virtually any label stock. Good pot stability.

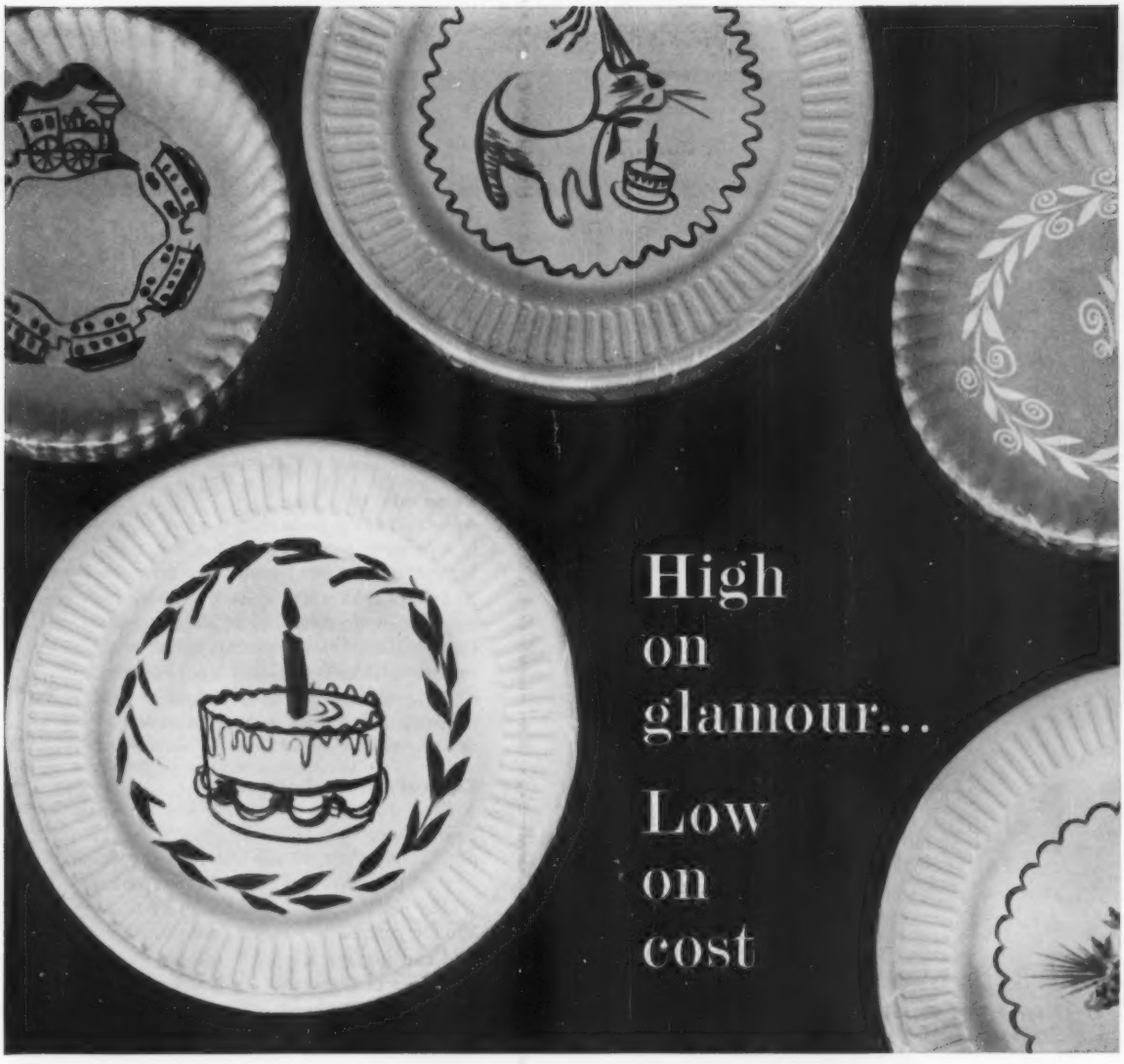
CHEMTITE offers new freedom from adhesive problems. Why not join other bottlers enjoying its advantages. We'd be glad to demonstrate. Write or call your nearest National office.

National

ADHESIVES

NATIONAL STARCH and CHEMICAL CORPORATION

750 Third Avenue, New York 17 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11



—*because of its outstanding machinability*

Paper plates—and all kinds of paper products—take on new sparkle and appeal when packaged in VITAFILM. Yet VITAFILM is no more expensive to use than any of the conventional films.

This strong, wonderfully transparent Goodyear film handles easily in high-speed packaging machinery. It seals quickly and permanently over a wide range of temperatures—doesn't split or run. You don't have to worry about broken packages.

VITAFILM actually transmits the texture of the product right through the package. Shoppers can *feel* the quality as well as see it.

And because VITAFILM doesn't attract dust, it attracts customers as no other film can. Prints beautifully, too.

If you're working with shelf paper, greeting cards, stationery and the like, better get the whole story on the film that's added new glamour to paper packaging. Write: Goodyear, Packaging Films Dept. Akron 16, Ohio.

Vitafilm BY GOODYEAR

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

The best thing between you and your customer

MAY 1960 VOL. 33 NO. 9

IN THIS ISSUE

83 **The supermarket: what's happening?**
Despite record food-store sales, more than half of the supermarkets which opened in 1959 did *less* business than anticipated. And since the package is the strongest factor in the successful development of self-service selling, what's happening in the supermarket today will have a profound effect on packaging in the decade ahead. At work are economic, technological and social forces to challenge the imagination of every marketer of packaged goods.
General interest.

90 **Scotch without a label**

Haig & Haig's popular-priced Five Star scotch now appears on retail shelves in a straight-sided bottle with no body labeling except a fired-on name and emblem. This restrained approach, which has a visual association with the distiller's Pinch bottle, is designed to help Five Star stand out among "billboard" competitors.
General interest.

93 **New 1,000-lb. shipper**
Packagers seeking greater efficiency in their handling operations will be interested in a markedly improved corrugated bulk shipper being used by Dow Chemical. Closed and strengthened by six strips of reinforced filament tape, the carton is secured to its pallet by adhesive alone. Reported advantages include increased resistance to shipping impact, ease of assembly and smoother warehousing and shipping.
Special interest: all dry bulk products.

94 **Cake mix in a bag**
Adaptable to the packaging of many dry products is a two-ply paper-and-polyethylene pouch which has opened up a new "economy" market for Thomas A. Steeves cake mixes without affecting sales of the company's established product in cartons. Compared with carton packaging, the new pouch cuts material costs 67% and labor cost 80%, enabling the company to sell a quality product for one-third less than its regular brand.
Special interest: foods, soaps, detergents.

98 **The roll-on applicator**
A *Great Packaging Discovery.* Just five years ago, Bristol-Myers marked a milestone in convenience packaging by introducing Ban lotion deodorant in a revolutionary roll-on applicator package. Within months, this new container put the firm into top position in a fiercely competitive field and sparked a surge to roll-ons by other packagers of deodorants. Today, the roll-on applicator accounts for 38% of deodorant sales, and its use is rapidly spreading to many completely unrelated products.
Special interest: foods, toiletries, household items.

100 **Fragrance comes to packaging**

Comette Hosiery Mills achieves sales success with a polyethylene bag for nylons that is impregnated with the aroma of perfume. The fragrance becomes part of the film via a process of blending scent concentrate into a carrier resin, then mixing small amounts into film resin.
Special interest: foods, toiletries, apparel.

FRONT FEATURES

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"Show case."

MODERN PACKAGING, Executive and Editorial Offices, 575 Madison Ave., New York 22, N.Y. Phone PLaza 9-2710

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OF MODERN PACKAGING®

102 **Shoe shines made easy**
S. C. Johnson makes an impressive debut in the shoe-polish field with two arresting convenience packages which represent significant technical progress in fabrication and decoration of metal and plastic containers and the use of urethane foam.
General interest.

108 **Better pop-in pack**
Even the best of packages can be improved upon. As proof, consider the case of Mennen Food Products, which has built new strength and convenience advantages into a successful pop-in-the-package popcorn container. Designed for pegboard display, the economical foil package is chalking up excellent repeat sales.
Special interest: foods.

110 **1960's winning set-up boxes**
Entries in National Paper Box Mfrs. Assn.'s 10th Annual Competition reflect a trend to better set-up-box performance through modern techniques of box-making. Described and illustrated are 31 first-award winners among 2,406 entries.
General interest.

113 **Bake-in-package produce**
Cook-in-the container convenience moves into the produce field as Suffolk Farms develops a new overwrapped-tray package for squash that is reported to withstand oven heat of 400 deg. F. The automatically wrapped, moisture-retaining paper-foil-polyester package eliminates preparation by the housewife and carries the vegetable from market to table without handling.
Special interest: produce, baked and frozen foods.

116 **Linerless tube for oil**
Holding the promise of application for many hard-to-handle semi-liquids, a thin-walled linear-polyethylene squeeze tube has been adopted by Phillips Petroleum as a dispensing container for penetrating outboard-motor gear oil. The tough, linerless, one-piece tube body is resistant to oil strikethrough and puncture.
Special interest: oil-base products.

TECHNICAL & ENGINEERING

121 **Irradiated polyethylene film**
Cryovac research develops a strong, clear, glossy biaxially oriented polyethylene film that can be shrink fitted for a wide range of packaging applications. The low-cost, heat-sealable film derives its exceptional strength and rapid-shrink properties from an electron-bombardment method that cross-links the molecular structure of low-density polyethylene prior to biaxial orientation. Easily printable, the packaging film has a tensile strength of 10,000 p.s.i. and a shrink tension of 250 to 450 p.s.i. *By Robert D. Lowry and William G. Baird, Jr.*

127 **Measuring gas transmission**
This article describes in detail a successful method for uniform gassing and sealing of pouches filled with milk powder, to control rancidity-causing oxidation. To pouch packagers of many other products marketed without benefit of refrigeration, it offers an evaluation of materials to determine the necessary efficiency at the lowest possible packaging cost. *By J. F. Carman, C. P. Bolton and P. M. Sautier.*

132 **Questions & Answers**
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STYLOUR packaging for Revlon by F. N. Burt Co., Buffalo, N. Y.; for 1847 by Rogers Bros. by The Box Shop, New Haven, Conn.; for Westclox by Westclox Div. of General Time Corp., LaSalle, Ill.; Palisades Plastic Mfg. Co., Englewood, N. J.; for Paper-Mate® by A&E Plastik Pak Co., Los Angeles, Cal.; for Gold Crown (Gemex) by Valley National Corp., Milldale, Conn.

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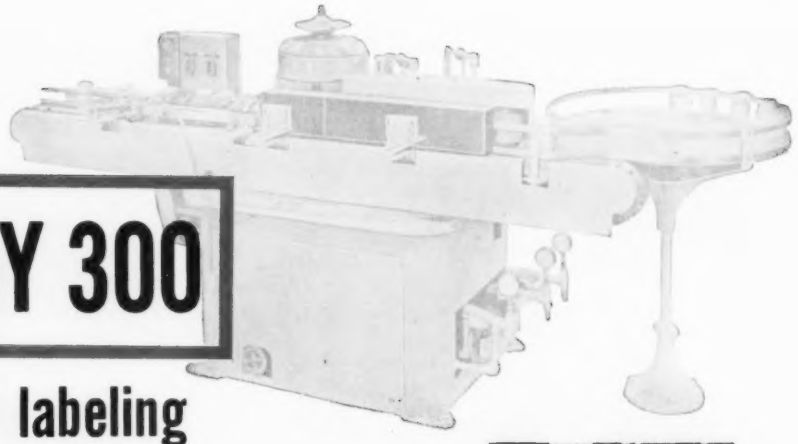


New PONY 300

300-per-minute labeling on any bottling line

The new, completely automatic PONY 300 delivers precision labeling at both the lowest original equipment cost of any labeler in its speed range, and at the lowest change-parts cost.

Perfect register

The PONY 300 uses suction label delivery to assure accurate placement. Its gluing action applies a rolling, all-surface pressure for a tight edge-to-edge bond. The label can't slip or fail to adhere. And this new high-speed labeler banishes seepage. Its micro-glue control constantly safeguards the appearance of your labeled bottles.

"No label—no glue" control

A new, exclusive *electronic index* detects label "failures" instantaneously, even at 300-per-minute speeds . . . makes it impossible for a mouthpiece not covered by a label to receive glue. New Jersey's dependable "no bottle—no label" index provides further protection against dry runs; completely eliminates hit-or-miss operation.

Variable speed control

Quick adjustment for production rates anywhere from 60 to 300 bottles per minute, depending upon the needs of your production line.

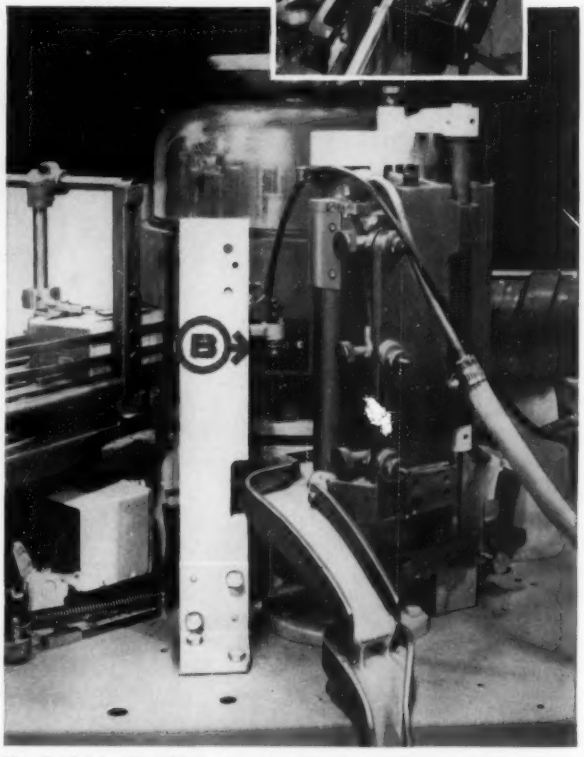
Fast, easy change-over

You need only 20 minutes for label changes; five minutes for bottles.

Lower cost

Prices for the PONY 300 begin at $13,500, far less than any comparable unit. There are additional savings on change-parts which cost only $250 to $550 per set.

No Bottle, No Label. Micro-switch control (A) detects absence of bottle. Prevents delivery of label to suction mouthpiece.



No Label, No Glue. Brass button in uncovered suction mouthpiece (B) contacts brass roller, completes circuit.

Send for new PONY brochure

NEW JERSEY MACHINE CORPORATION

AUTOMATIC LABELING • CARTONING • PAPER BOX MACHINERY

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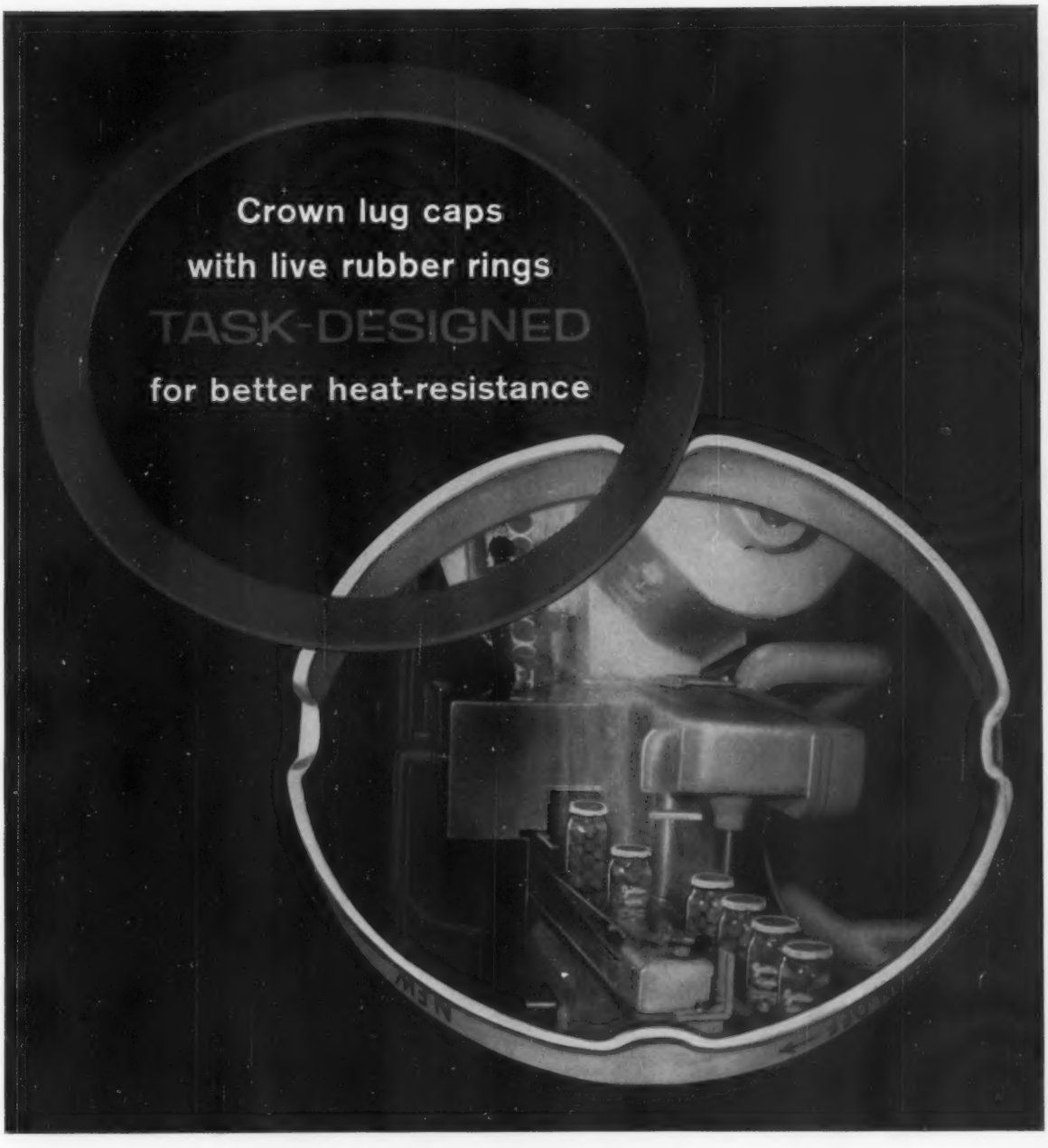
MAIN OFFICE & PLANT • 16th ST. & WILLOW AVENUE, HOBOKEN, N.J.



Task-Designed Crown lug caps—with rings of live rubber, the only material that completely retains its sealing efficiency under vacuum capping and processing. They turn on easily and seal firmly, despite minor irregularities in the glass. Your product is thoroughly protected, from kettle to kitchen. Housewives prefer live rubber rings, too, because they don't soften and stick to the lip of the jar. Live rubber resists wear, so continues to seal efficiently no matter how often the cap is removed and replaced.

CROWN

for closures · cans · crowns · machinery

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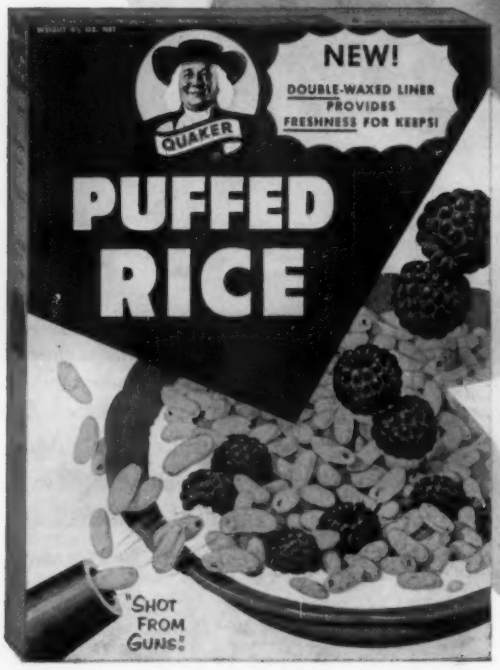
Just Between You and Your Customer

Customer loyalty is your most valuable business asset. One of the custodians of this loyalty is your package, and the product protection it provides.

Here's where Riegel can help, through research, development and manufacture of packaging materials . . . tailor-made for your product . . . with equal emphasis on protection, low cost, high packaging speed and attractive appearance. More than 600 different materials to choose from . . . papers, paperboards, foils, films and combinations . . . waxed, coated, printed and plain . . . tailor-made or standard.

Write to Riegel Paper Corporation, 260 Madison Avenue, New York 16, N. Y.



Riegel

PROTECTIVE PACKAGING MATERIALS

Quaker Puffed Rice is protected with a special Riegel laminated and over-waxed Cereal Liner. Run at high-speed on Pneumatic Scale equipment.

NEW handy screw driver bar

across the cap opens cigarette lighter plugs. It's a Canco exclusive!

NEW extra-long flexible polyethylene spout

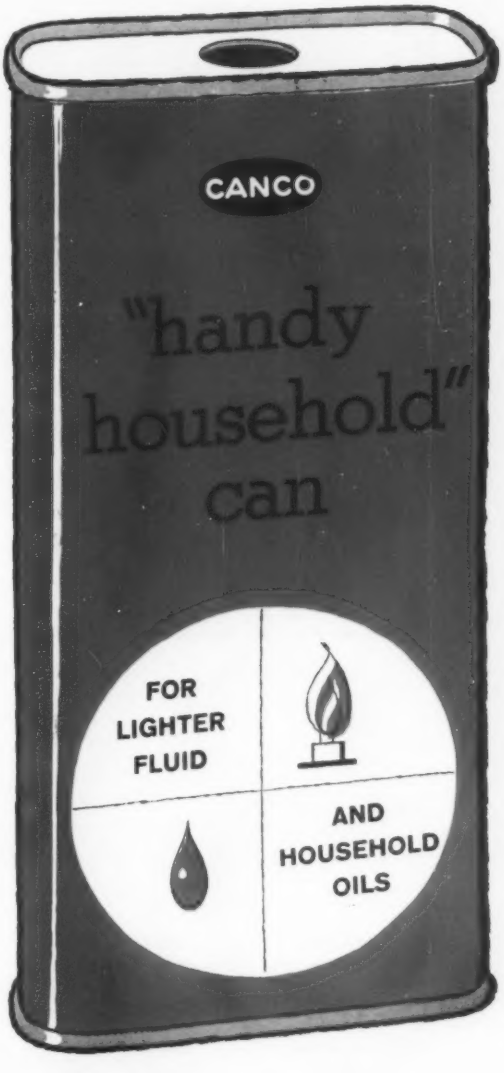
It makes a handy oiler for hard-to-reach places.

NEW plastic push-in assembly

attaches spout to can. It makes assembly easy . . . means lower manufacturing costs.

NEW economy

Spouts and caps are very inexpensive . . .



Something **NEW** has been added to Canco's "handy household" can!

Canco's new obround can provides all-round lithography. It has a sealed spout and a screw-on cap. These tried and true advantages, together with the many new features, can mean added sales appeal for your products and lower production costs for you.

The obround can is another example of how Canco's alert and imaginative packaging program works. It creates modern convenience packaging that results in a more saleable product. Put this skill to work for you . . . call your Canco salesman today!

CANCO Division **AMERICAN CAN COMPANY**

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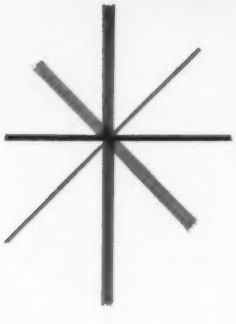

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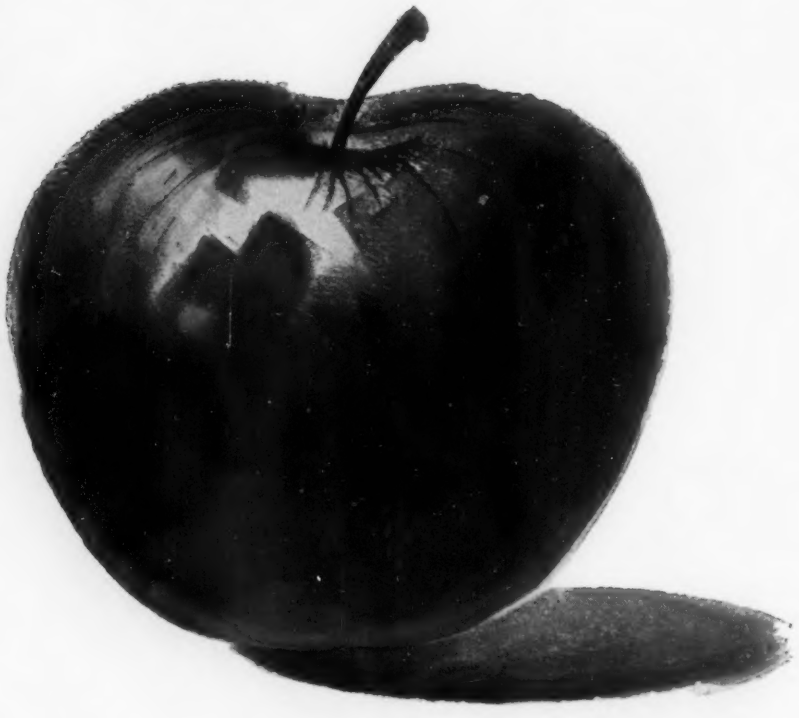
Creative packaging is a specialty at Armstrong Cork Company, Lancaster, Pennsylvania.

Armstrong PACKAGING

1860-1960 Beginning our second century of progress

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV



how would you mark it?

Just suppose you *did* want to mark apples with good, clear prints of your trademark — at 80 or 100 a minute. First you'd have to design something to get them into position — fast enough — for marking; then you'd need a printing element to make a clear, non-damaging mark; and finally, an ink that wouldn't rub off or fade out — *and* one that would taste good!

We've never built an apple-marking machine but that isn't saying we might not someday. Just in the last ten years or so, we've had to think up more different types of marking machines, feeds and takeaways, marking processes and specialty inks than in our previous 38 years of business. This is because of all the new products and new materials in every industry — and an ever-increasing awareness of the many values of good marking for both identification and decoration.

Marking has long since ceased to be something done only when necessary — and then hit or miss. Now it can save you money, give you a competitive edge, prevent production tie-ups — *if* you've got the right method. That's our specialty — for every industry. Markem Machine Co., Keene 1, N. H.

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Whether it's an overwrap or a liner, on a market shelf or in a vending machine, at some point Aluminum Foil *flags the attention inescapably.* And in the same flash of recognition, the customer gets a deep impression of *quality.* The product image takes on attributes of *leadership!* Pictured here on Reynolds Aluminum Foil are products representing one famous brand... one from the ever-growing roster distinguished by Reynolds Wrap Aluminum Packaging. Why not give your product this Look of the Leader!

QUALITY PROTECTED WITH Reynolds Wrap ALUMINUM PACKAGING

SEAL HELPS SELL! Proclaim the fact that your product has the quality protection of Aluminum Foil... it pays! Tell the story on your package, too... with the Reynolds Wrap Aluminum Packaging Seal. Used on more and more products, known to more and more shoppers... surveys prove it helps sell!

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PICTURED ABOVE WITH REYNOLDS WRAP... FINE PRODUCTS OF NATIONAL BISCUIT COMPANY

Look to the Leader in Foil Packaging

REYNOLDS ALUMINUM

PACKAGING LEADERSHIP

The advantages of Aluminum Foil for packaging fall into two categories – colorful brilliance and protection – and Reynolds has been the leader in developing both. Aluminum's brilliance only became colorful when Reynolds pioneered in printing on foil... and now Reynolds is the largest in the field, carrying brilliant beauty all the way from art design to final package. And Reynolds research is continually scoring new advances in aluminum *protection* ... new foil laminations, new containers, also non-flexible packaging such as aluminum cans and bottle carriers. Reynolds foil carton line now includes the Mead-licensed CLUSTER-PAK.* Whatever your needs, call the nearest Reynolds sales office. Or write: **Reynolds Metals Company,** Richmond 18, Virginia.

**Trade mark of Mead Corporation*

See these Reynolds shows on ABC-TV network: "BOURBON STREET BEAT" and James Michener's "ADVENTURES IN PARADISE" Monday nights.

REYNOLDS ALUMINUM

Acetate Sheeting...

by **JOSEPH DAVIS PLASTICS COMPANY** is the perfect material to make this formula work, and the blister pack shown above is an excellent example. Designed by the Northam Warren Corporation for its Cutex Emery Boards, it is fabricated and printed by **Western Printing Company,** Teaneck, N. J., using JODA crystal clear acetate. This type package not only protects the product from shipping, handling and shelf wear, but allows it to be seen **instantly** as well—the ideal combination for successful selling.

JODA extruded acetate sheets, rolls and film in all gauges — transparent, translucent or opaque — are excellent for vacuum forming. Why not investigate the advantages of JODA acetate and see for yourself how it can help solve your packaging problems? Send for Brochure M.

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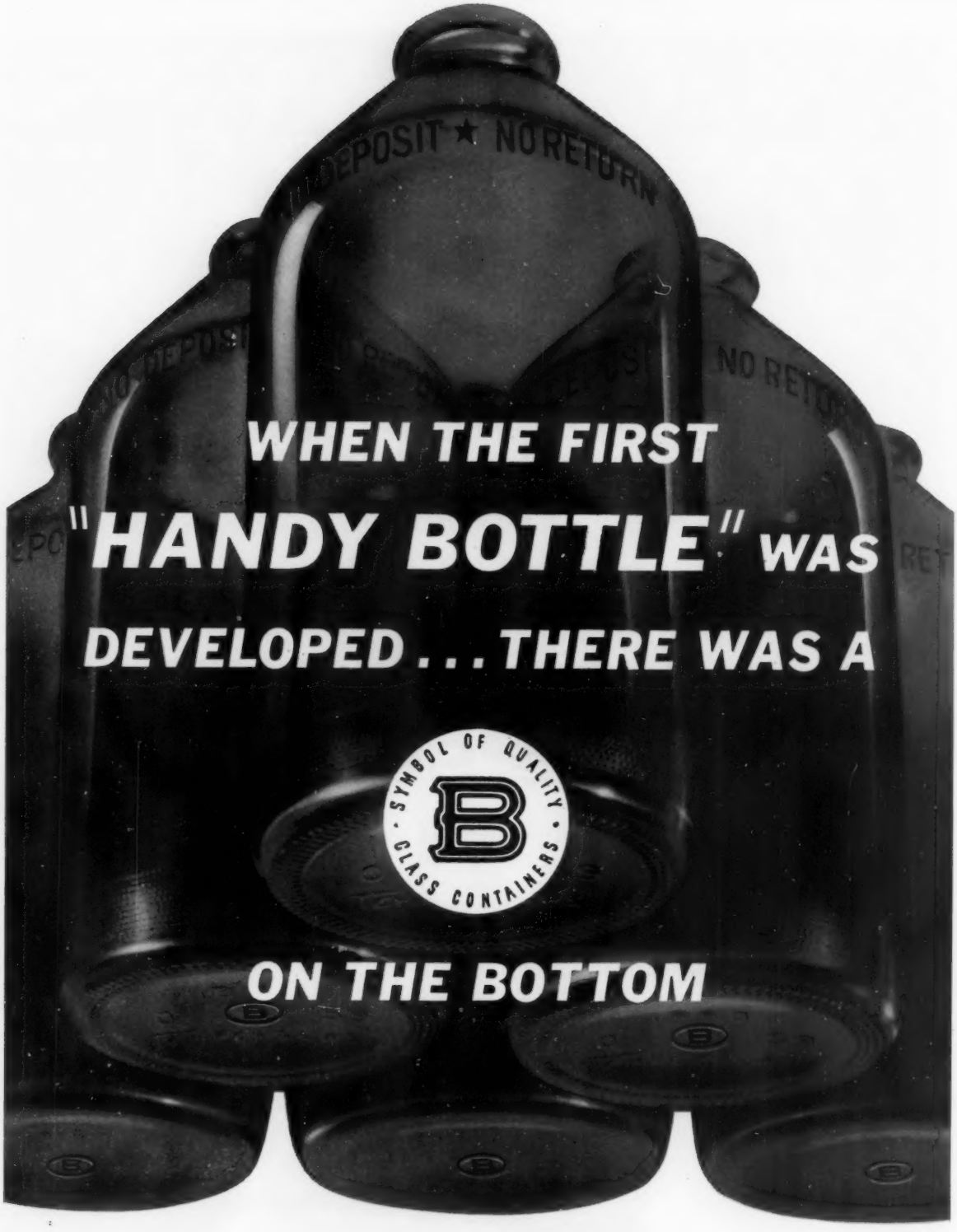

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COMPANY, INC., Brockway, Pennsylvania
Sales Offices in Principal Cities
SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W Va.
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CELLU-CRAFT EXPANDS ITS FACILITIES

TO SERVE YOUR FLEXIBLE PACKAGING NEEDS COMPLETELY

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CELLU-CRAFT
PRODUCTS CORPORATION

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CONVERTING: Rolls, Sheets, Bags, Pouches, Envelopes.

MODERN MERCHANDISING calls for Modern Moistureless, Self-Sticking kleen-stik® Pressure-Sensitive LABELS

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- Price Labels • Guarantees
- Warning Labels • Trademarks
- Instruction Labels • Wiring Diagrams

Looking for the proved way to attract, inform, and convince shoppers at the point of sale? Use Kleen-Stik—the versatile, economical labels that apply quickly and easily . . . stick tight on any product or package . . . yet remove easily when desired.

Kleen-Stik solves the most difficult labeling problems—even on hard-to-label surfaces such as glass, metal, wood, ceramic, plastic, and plastic films. Easy to print by any standard process . . . any number of colors. Kleen-Stik Labels can be produced as single split-back units, or in rolls for low-cost automatic dispensing—the world's fastest, most economical labeling method!

Only KLEEN-STIK Gives You These Self-Sticking Label Advantages:

• NEEDS NO WATER, glue, heat, or chemicals • STICKS TIGHT on any surface—won't pop off or pucker • EASY TO APPLY—just peel backing and press in place • CHOICE OF removable or permanent adhesive

Choose from a Wide Range of KLEEN-STIK Label Stocks

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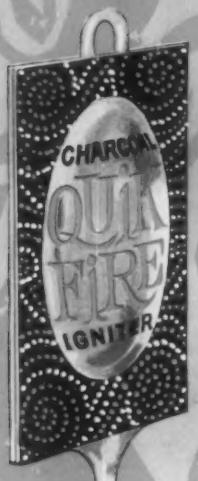
kleen-stik®
PRODUCTS, INC.

7300 W. Wilson Ave. • Chicago 31, Ill.
Plants in Chicago, Newark, Los Angeles, and Toronto, Canada

For that next label job, investigate the benefits of Kleen-Stik—write today for samples and full information.

OVER 25 YEARS OF PRESSURE-SENSITIVE LEADERSHIP!

3M PRESENTS . . . creative packaging ideas by distinguished designers



Harley Earl Associates design in "SCOTCHPAK"

HARLEY EARL

From this crack creative staff an idea for a handy new squeeze-bag container for charcoal-igniting fluid—in **"Scotchpak"** Heat-Sealable Polyester Film. Simply snip off spout end—squeeze sides of bag to apply. Vacuum re-seals spout tip after each use. Hang-up tab and generous label area makes it a self-merchandiser. Similar **"Scotchpak"** Film containers can be used for hand cream, catsups, sauces, other liquid or semi-liquid products.

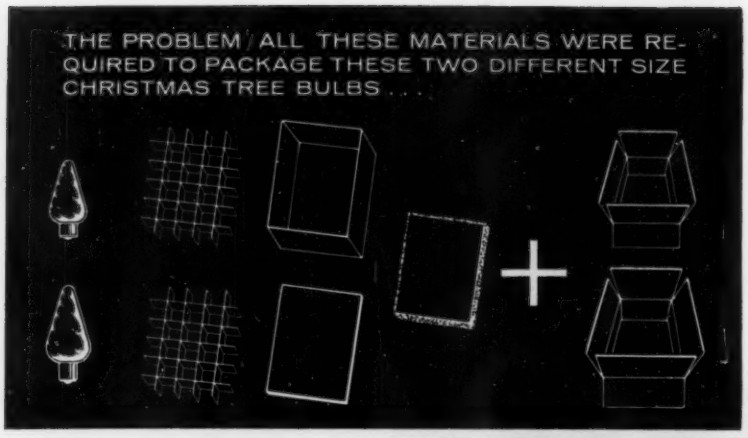
Looking for a new design? Try **"Scotchpak"**—the film of the future for new design ideas today. Write **Film Products Group,** 3M Co., 900 Bush Avenue, St. Paul 6, Minn.—Dept. CAK-50.

"SCOTCHPAK" IS A REGISTERED TRADEMARK OF 3M CO., ST. PAUL 6, MINN. EXPORT: 99 PARK AVENUE, NEW YORK 16, CANADA: LONDON, ONTARIO

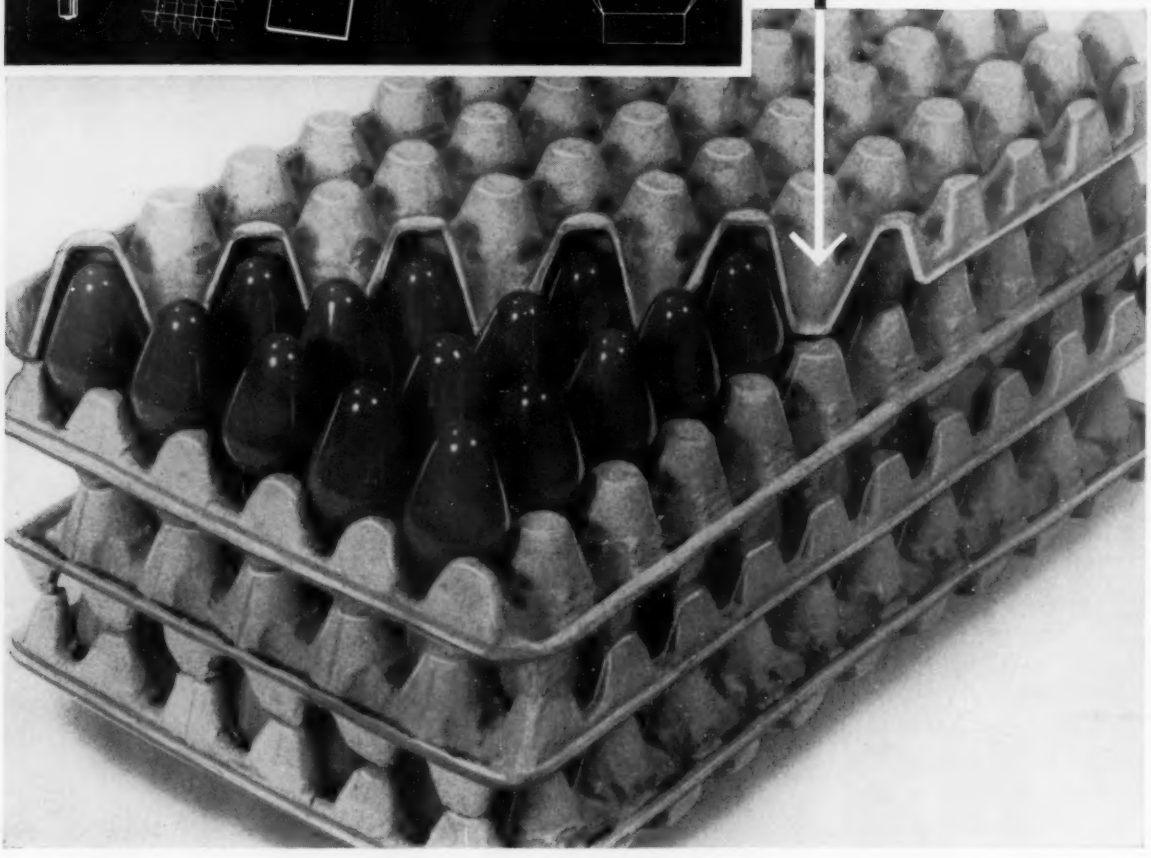
MINNESOTA MINING AND MANUFACTURING COMPANY

...WHERE RESEARCH IS THE KEY TO TOMORROW

3M COMPANY



Another problem solved with Keyes Custom Molded Packaging



NOW BOTH SIZE BULBS ARE PACKAGED WITH A SINGLE MOLDED PULP TRAY AND STANDARD BOX

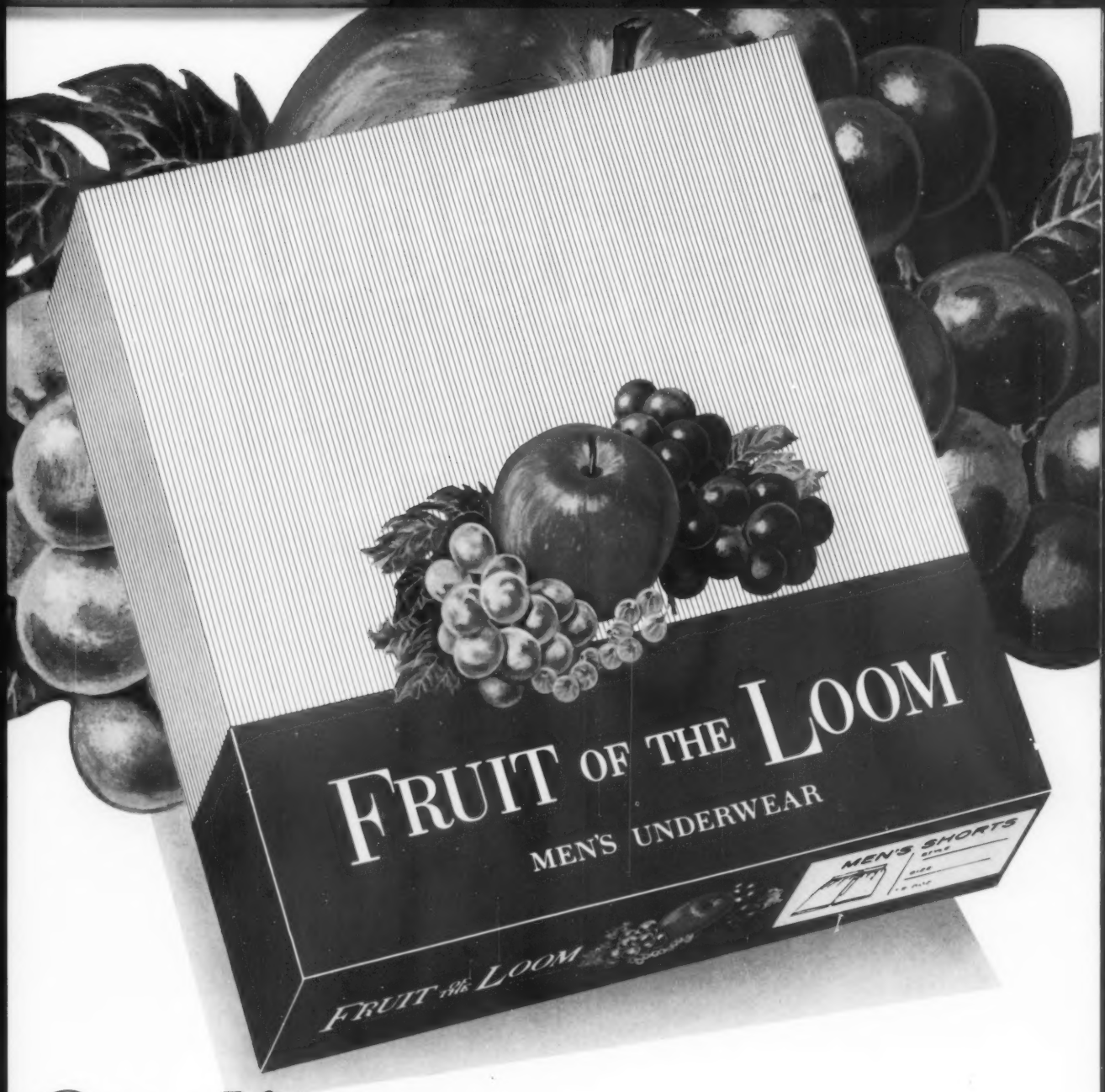
Let Keyes Product Development Engineers show you how to cut costs, cubage and breakage with custom molded packaging

Molded pulp is the one inexpensive packaging that combines rigidity with remarkable cushioning properties. This packaging material can be molded to the shape of your product . . . eliminating the need for set-ups, cell partitions, fillers, pads and loose packing material. If you'd like to learn how Keyes Custom Molded Packaging can cut your costs, cubage and breakage, write:

Product Development Division, Dept. MP-5,

Keyes Fibre Company, Waterville, Maine

KEYES MOLDED PRODUCTS



Quality . . . A Profitable Tradition

There's a valuable lesson in merchandising for all to see in the success story of Fruit of the Loom men's and boy's underwear.

First and fundamental, of course, was product quality. But many consumers can't judge that on their own. So . . . since back in 1938, Union Underwear Co. Inc. has been using Sutherland *quality* cartons for their instantaneous quality impression to prospective customers.

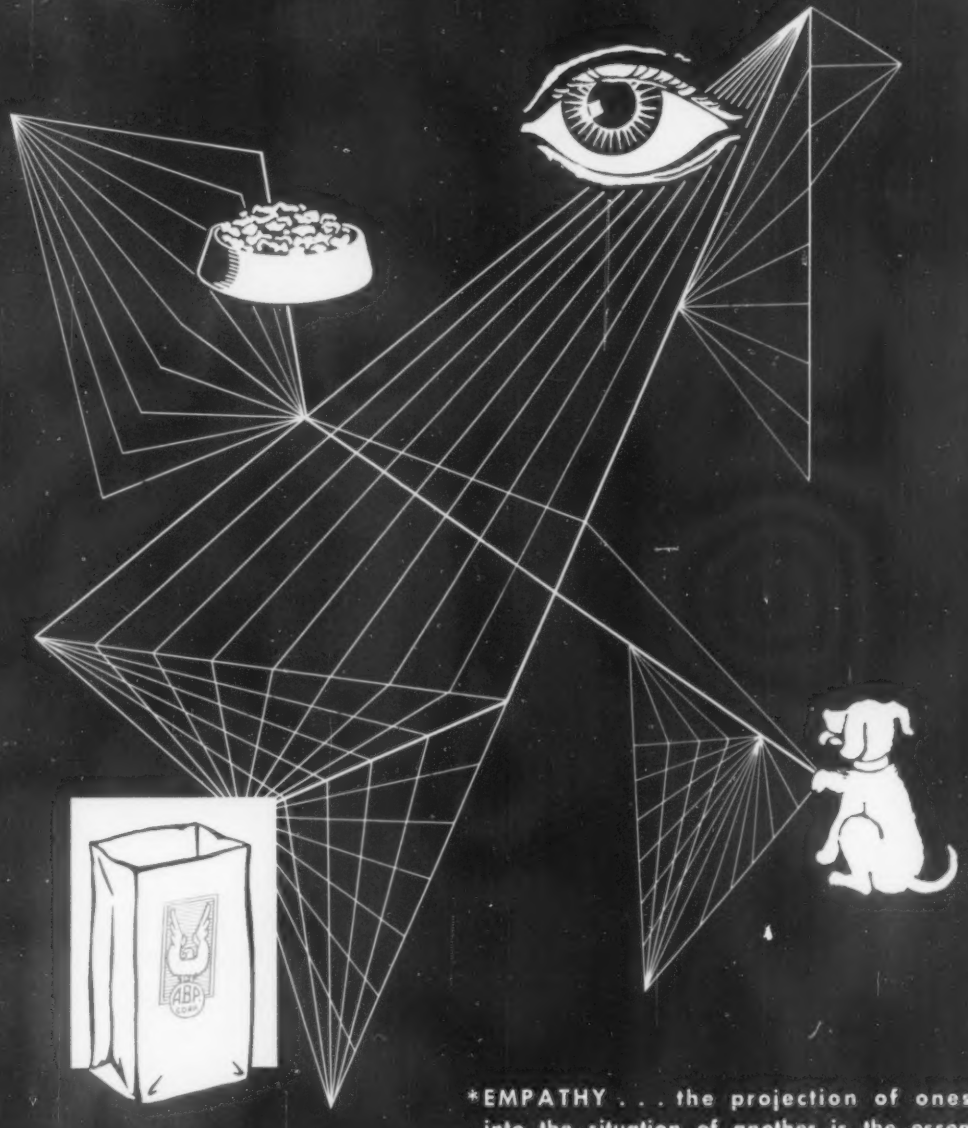
And customers got the story—to make Union Underwear the largest producer in the world of men's and boy's underwear!

Fruit of the Loom underwear cartons have been outstanding in their field, as is this new design that is lithographed in full color to tie-in with other promotion programs.

There's a representative near you to show you this and other Sutherland packaging successes. Write now to make sure he sees you soon.

KVP SUTHERLAND PAPER COMPANY
SUTHERLAND DIVISION
KALAMAZOO, MICHIGAN

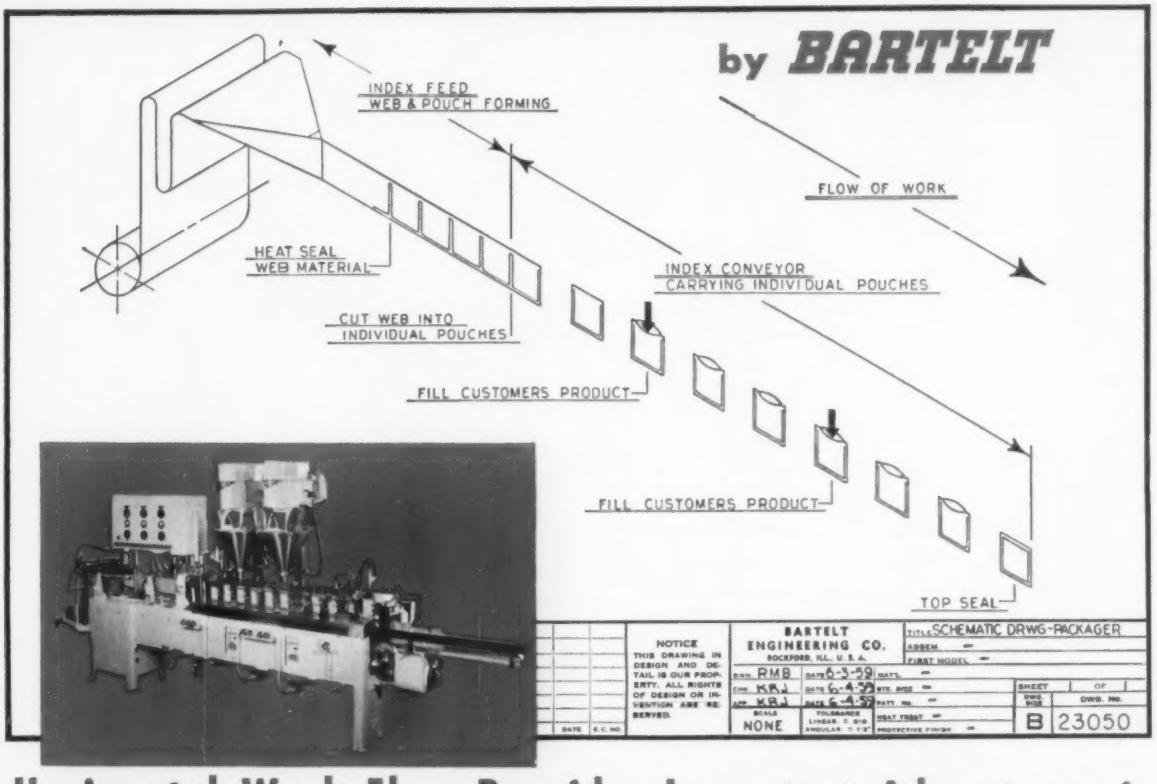
ἐμπάθεια*



*EMPATHY . . . the projection of oneself into the situation of another is the essential ingredient in the creation of customer confidence—the basis for rising sales.

AMERICAN BAG & PAPER CORP. Phila. 47, Penna.

DESIGN FOR SUPERIOR FLEXIBLE PACKAGING!



Horizontal Work Flow Provides Important Advantages in Fabricating High Strength Flexible Pouches...

Study the drawing above and the points listed below. *No other flexible packaging machine can provide you an operation with all these important advantages!*

1. Forming of the web is *completed* prior to bottom and side sealing. Thus, no forming stress interferes with proper sealing . . . no built in pleats or tucks occur and superior seals are assured.

2. Side and bottom seals are *set* before cut-off, pouch opening, or filling takes place . . . Seals cannot be weakened by product contamination, or stress caused by cutting, opening or filling while seals are hot and plastic.

3. Filling takes place in a station designed for filling only. Thus, product contamination of cut-off knives, seal bars or other tooling is negligible. The only thing below the fill station is the stainless steel dust cover and spill chute.

4. There are several stations available for the application of special tooling: cooling bars, perforating blades, partition seal bars, top fold mechanisms, tear string and saddle label applicators, die cutting tools as well as special filling devices.

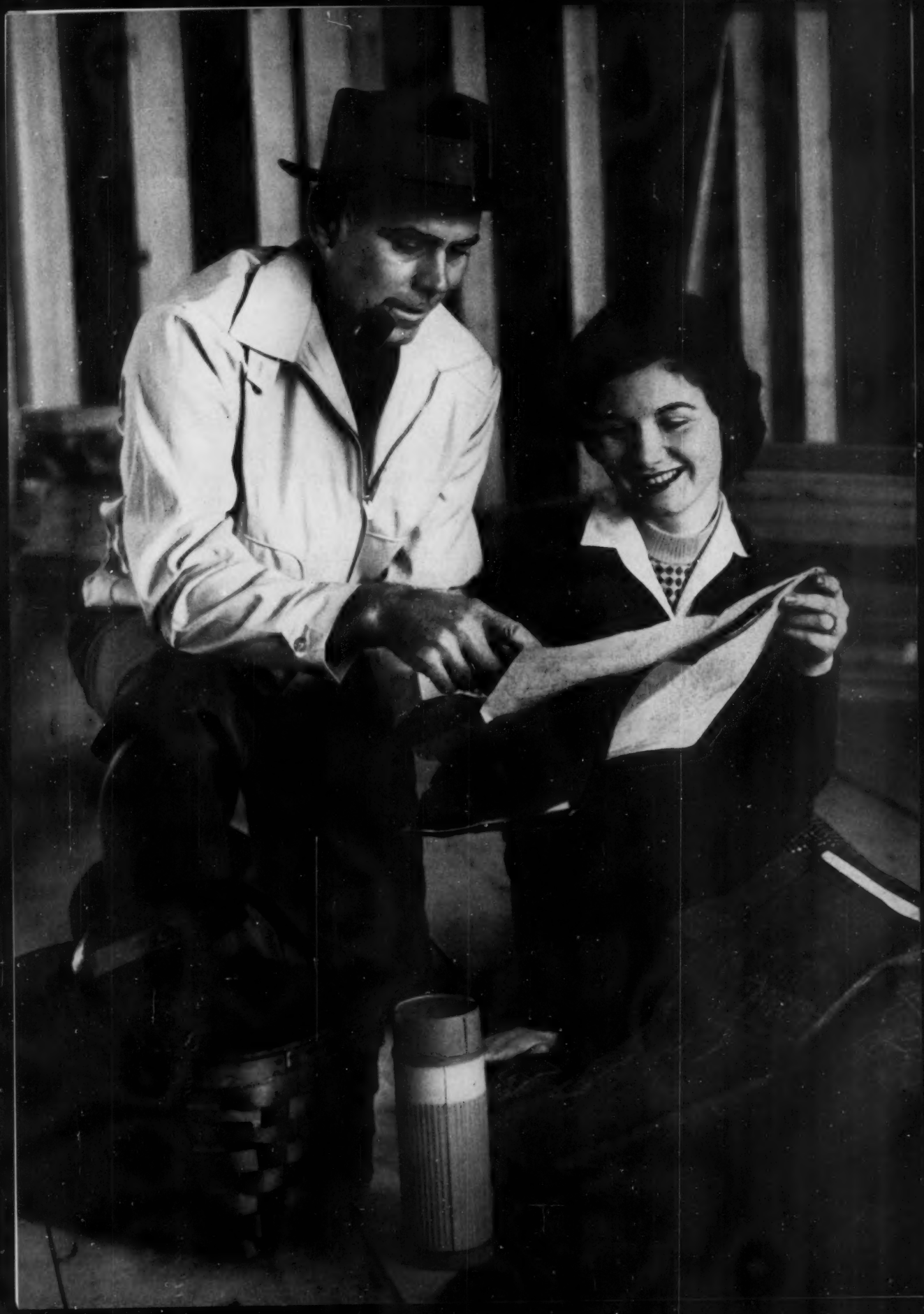
5. Top sealing also takes place in a position of its own, well removed from the filling operation to avoid seal contamination. The preceding few stations are free and available for paddling and pouch stretching so that the pouch is presented flat and ready for an undistorted top seal.

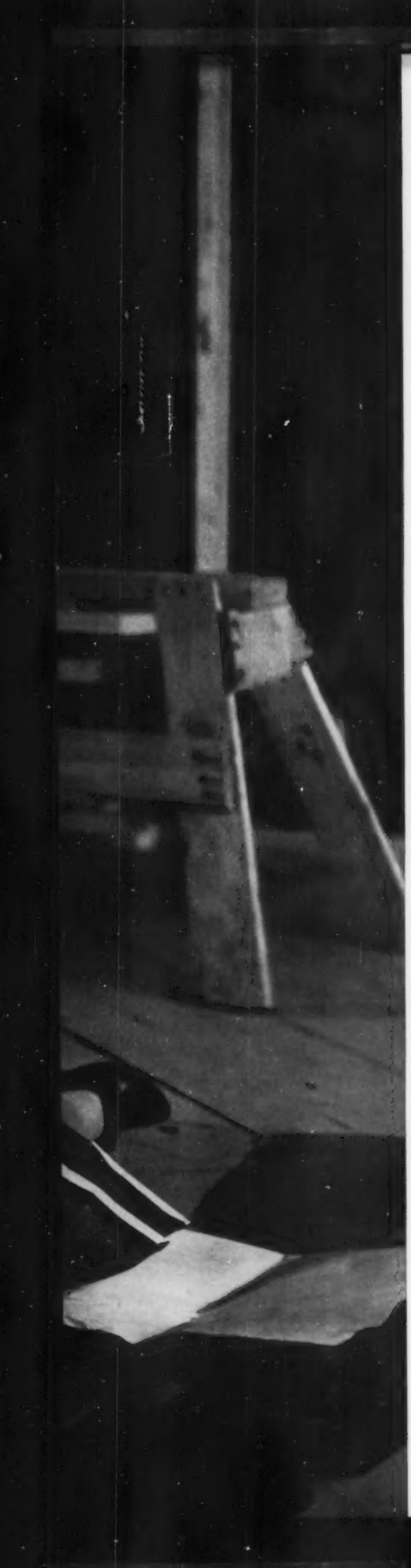
6. This logical and practical sequence approach means that each operation not only has its own position, but its own mechanism designed for one operation only. The absence of complex double or triple duty mechanisms substantially reduces maintenance problems and costs while it increases operation efficiency.

WHERE UNFAILING QUALITY COUNTS!

BARTELT ENGINEERING COMPANY

1900 HARRISON AVE., ROCKFORD, ILLINOIS • NEW YORK, 370 LEXINGTON AVE., N.Y.C.





Your challenge of the EXCITING 60's

—12 MILLION MORE HOUSEHOLDS!

LET ANCHOR HOCKING EXPERIENCE BACK YOUR BID FOR THIS NEW MARKET OPPORTUNITY!

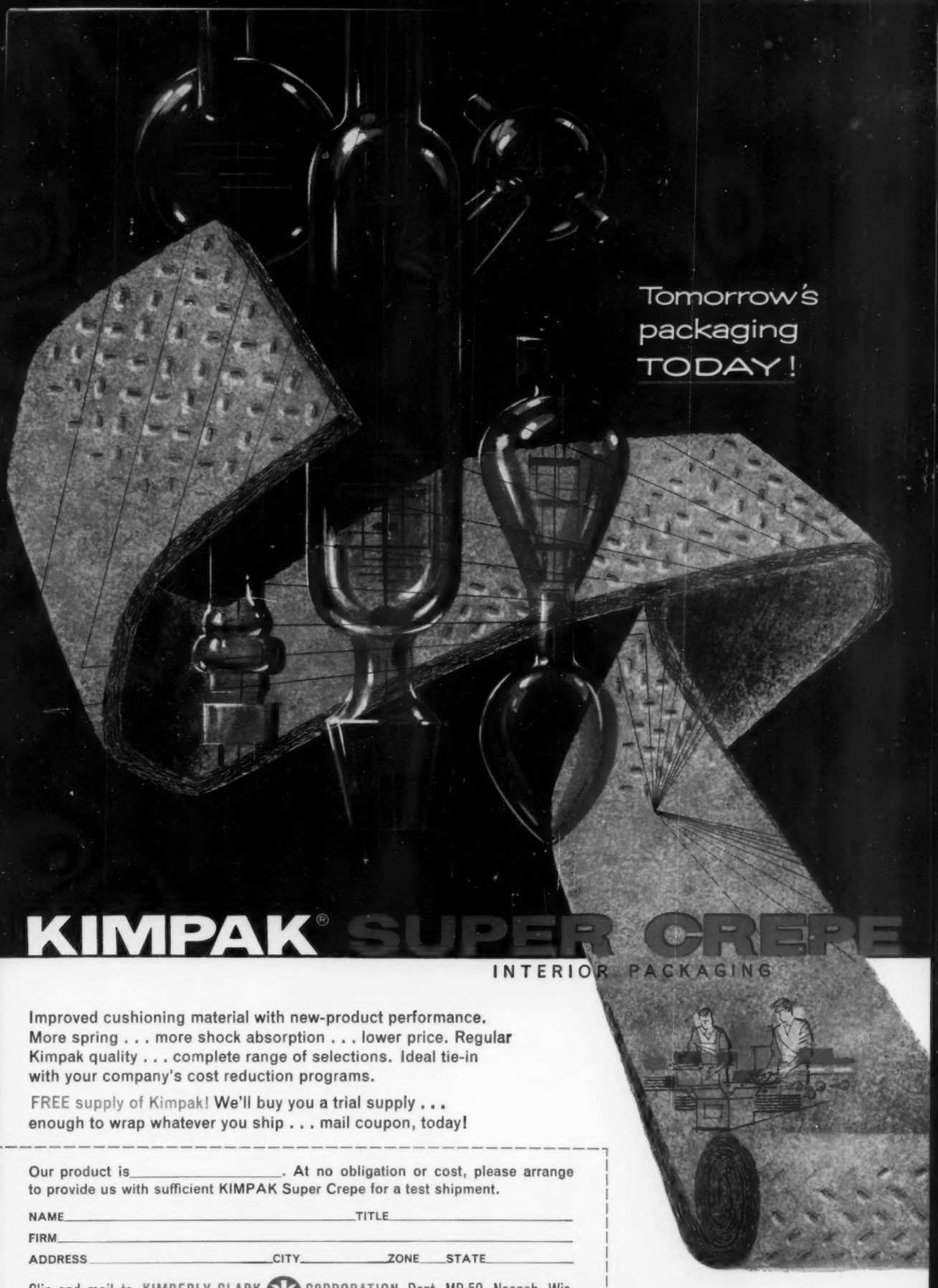
Population experts state that during the 1960's the number of households will increase by almost one-fourth. An immense new market!

For practically every product, packaging will be more important than ever before. And the glass package, with its appeal, convenience and protection advantages, will give your products a most desirable competitive edge. To help you make the most of the *glass package* in your bid for expanding markets, Anchor Hocking offers you the benefits of its vast experience and facilities.

Anchor Hocking experience and leadership in research and engineering can bring you tomorrow's thinking today. It results in uniform, quality-controlled glass containers and closures, scheduled, made and delivered on time. And the experience of your Anchor Man, backed by laboratory and field specialists, provides sound packaging recommendations to help keep your lines operating efficiently. Anchor Hocking Glass Corporation, Lancaster, Ohio—bringing you the extra values of *specialization* in glass packaging.

ANCHOR HOCKING

Get set for the exciting 60's with Anchorglass® Packaging—put an Anchor Man on your team



KIMPAK® SUPER CREPE

INTERIOR PACKAGING

Improved cushioning material with new-product performance. More spring . . . more shock absorption . . . lower price. Regular Kimpak quality . . . complete range of selections. Ideal tie-in with your company's cost reduction programs.

FREE supply of Kimpak! We'll buy you a trial supply . . . enough to wrap whatever you ship . . . mail coupon, today!

Our product is_____. At no obligation or cost, please arrange to provide us with sufficient KIMPAK Super Crepe for a test shipment.

NAME_____ TITLE_____

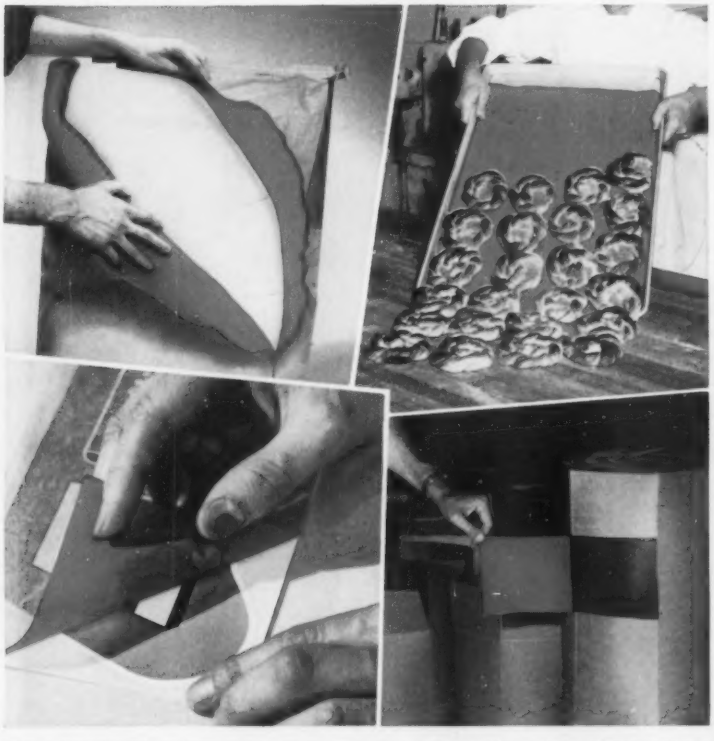
FIRM_____

ADDRESS_____ CITY_____ ZONE___ STATE_____

Clip and mail to KIMBERLY-CLARK CORPORATION, Dept. MP-50, Neenah, Wis.

SILICONE NEWS from Dow Corning

Stuck With High Costs?



On Consumer Products . . . Syl-off coated papers mean more satisfied customers. As backing for self-adhering wallpaper, decorative trim, labels, or other pressure sensitive items, Syl-off coated papers peel free with ease . . . prevent tearing the item when the backing is removed . . . and have no effect on the pressure-sensitive characteristics. As wrapping or interleaving for foods, or as pan liners for sticky candies and baked sweet goods, Syl-off coated papers leave no bits of wrapper clinging.

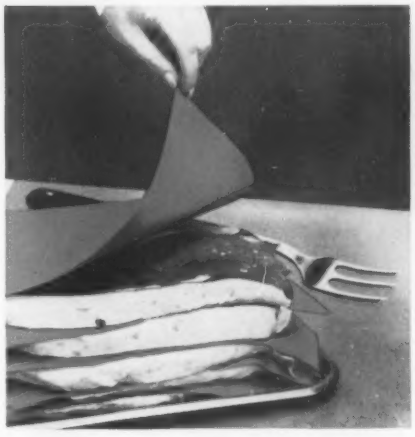
Products Pop Free from Paper Coated with SYL-OFF . . . New Processing, Packaging Aid Saves Money

If you make, handle, ship or receive sticky products, you'd be wise to look into the use of package liners, wraps, interleaving or backing papers coated with Syl-off* Dow Corning *silicone* coatings. They give amazing release!

Consider the higher production efficiency, lower maintenance costs and extra sales advantages that accrue. Eliminate sticking problems, and you speed up processing and handling operations . . . cut product waste right to the bone. Syl-off is comparable to conventional nonadhesive coatings in cost . . . but its lighter weight cuts shipping costs for coated paper.

Syl-off coated papers have been tested with more than 100 adhesive materials — tough stickers like asphalt, food products, glue, adhesives, unvulcanized rubber — and have been found to release quickly, cleanly time after time. Important, too, is the fact that Syl-off coatings don't in any way alter or contaminate products — and they last as long as the paper.

There are other important features besides controlled stick-proofness. For example, Syl-off coated papers have a natural non-oily lubricity. Water repellency is still another silicone feature imparted by Syl-off. Syl-off silicone coatings are also readily applied to foil or plastic film — impart the same desirable characteristics as they do to kraft, glassine, parchment and paperboard.



Best way to find out what type Syl-off coated paper can help you most is to get in touch with the fine houses that offer papers or containers with Syl-off coatings. Write to Dow Corning for the complete list of Approved Sources plus an informational brochure describing Syl-off paper coatings. Do it today. Address Dept. 7305.

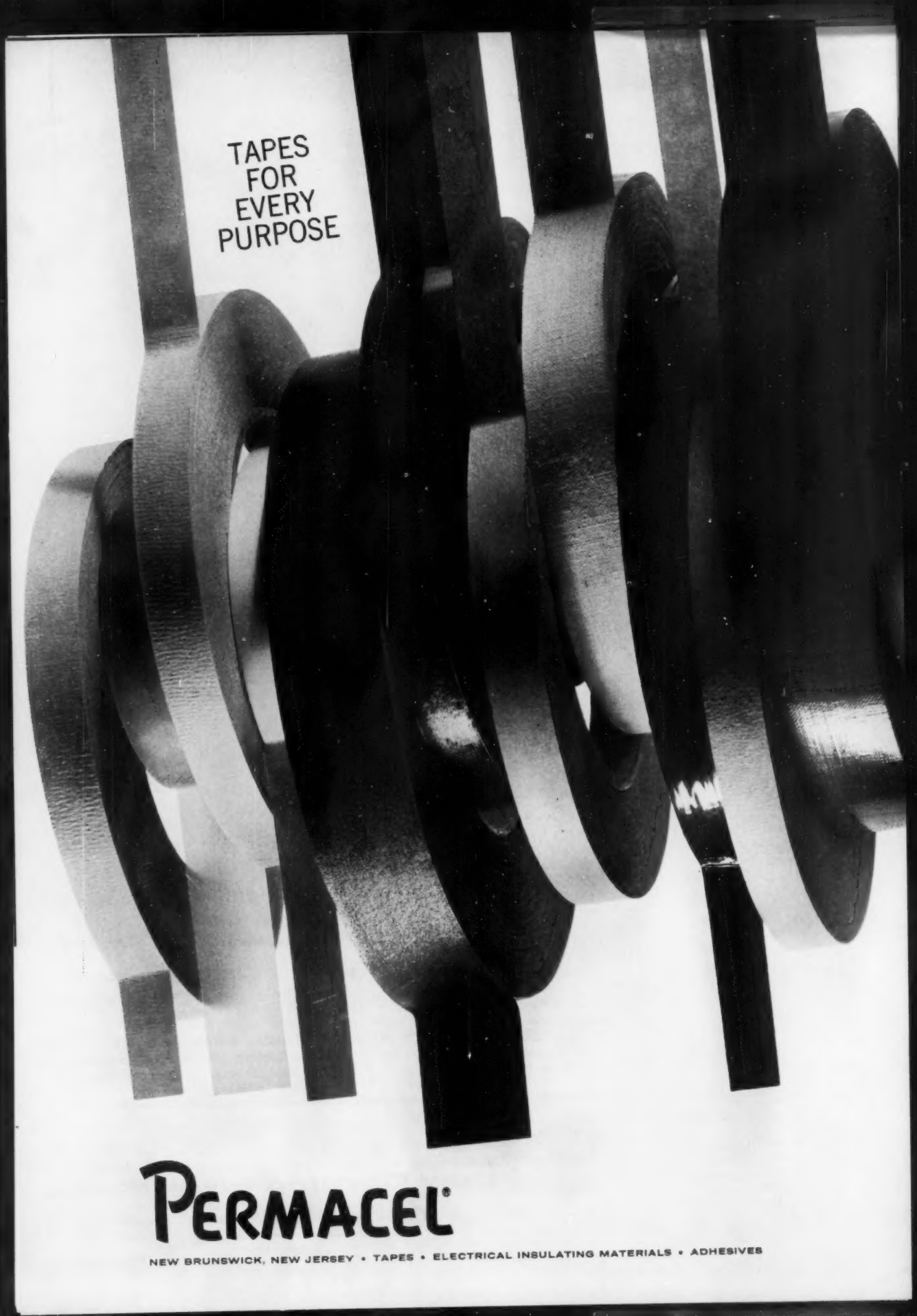
*TM Dow Corning Corporation.

Your nearest Dow Corning office is the number one source for information and technical service on silicones.

first in silicones

Dow Corning CORPORATION
MIDLAND, MICHIGAN

ATLANTA BOSTON CHICAGO CLEVELAND DALLAS LOS ANGELES NEW YORK WASHINGTON, D. C.



PERMACEL®

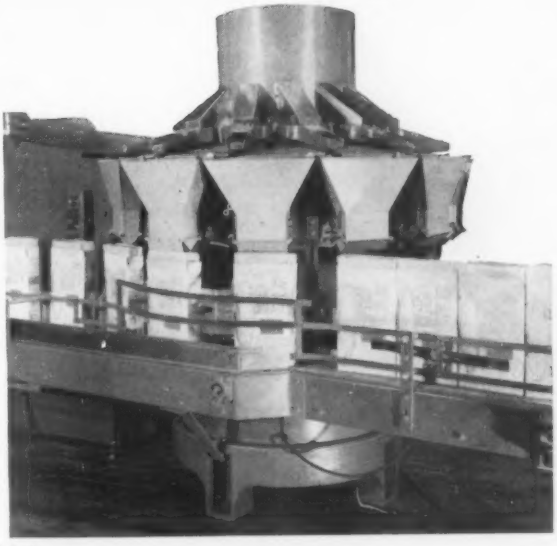
NEW BRUNSWICK, NEW JERSEY • TAPES • ELECTRICAL INSULATING MATERIALS • ADHESIVES

ac′cu-ra-cy (*ăk′u-rà-sĭ*)

. . . *as in* WRIGHT *weighers*

Included in the Wright line of packaging machinery is a wide variety of weighing equipment.* These machines differ in function but each has this common characteristic: precision accuracy. Wright customers abhor waste. They refuse to condone overweights. Mail the coupon below for tell-all literature.

* *Examples of other Wright machines are the Wrightwrap® for wrapping, sealing, and labeling cracker sandwiches, and the Strip Stamper for applying revenue stamps to bottles.*

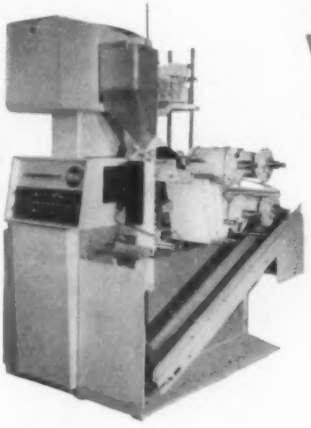


WRIGHT NT WEIGHER

Rotary net weigher for packaging the total output of a continuous production process such as a bakery oven. Synchronized carton flow. Range: 3 to 16 oz. Speed: 70 to 120 per minute.

WRIGHT Advanced Bagmaster®

Completely automatic bag forming-weighing & filling-sealing system. Produces up to 45 pillow-type packages per minute in range from 2½ to 8 inches in width and from 3 to 14 inches in length. Advance features permit the precision and accurate packaging of fragile and multi-dimensional products.



HY-TRA-LEC® Weigher M

Complete line of semi-automatic and automatic, single head and multiple head net weighers for packaging free-flowing, dry products into any type package. Utilizes Wright's patented Hy-Tra-Lec weighing method. Precise. Rugged. Range: ½ to 16 ounces.

WRIGHTRONIC® Checkweigher

Electronically gross weighs each package at speeds up to 150 per minute and (1) signals whether package is overweight, on weight, or underweight, (2) registers a running visual count in each weight classification, and (3) rejects any package outside plus or minus limits. Range: 4 ounces to 2 pounds.

WRIGHT MACHINERY COMPANY
DIVISION OF SPERRY RAND CORPORATION
DURHAM, NORTH CAROLINA

Gentlemen: Please send me descriptive literature on the following machines:

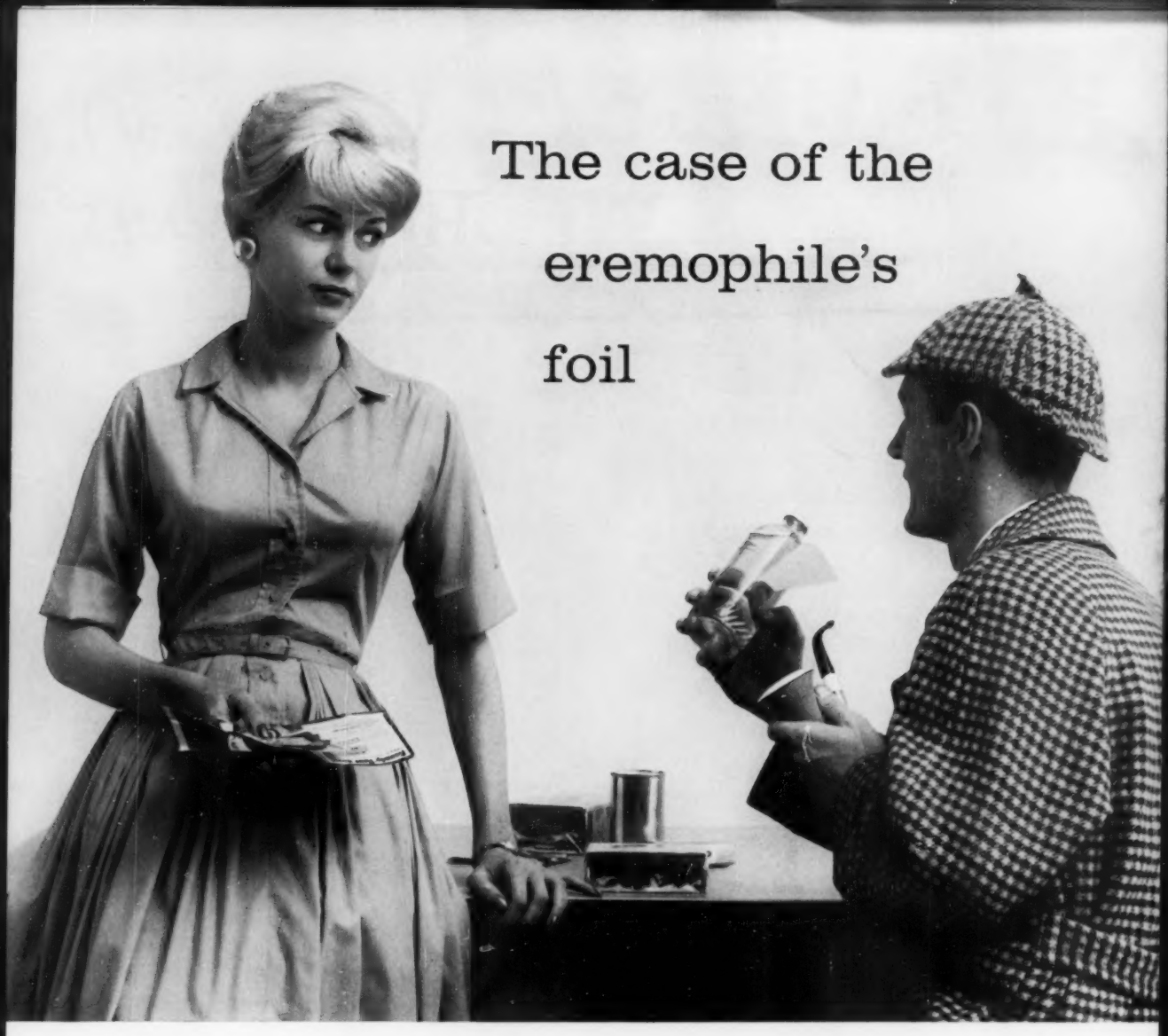
( ) WRIGHT NT WEIGHER
( ) ADVANCED BAGMASTER®
( ) WRIGHTRONIC® CHECKWEIGHER
( ) HY-TRA-LEC® WEIGHER

NAME_____

COMPANY_____

STREET_____

CITY & STATE_____



FEARLESS FULLER: Just wrapped up a very sticky case, Miss Watson.

MISS WATSON: Tell me all the devious details, Fearless.

FEARLESS FULLER: Well, I call it "The case of the eremophile's foil."

MISS WATSON: I know what foil is. But what's an eremophile? Some new type of foreign car?

FEARLESS FULLER: No. An eremophile is a person who loves solitude.

MISS WATSON: You mean like, *I vant to be alone.*

FEARLESS FULLER: Exactly. Only in this case, they wouldn't let this eremophile, a packaging engineer, alone.

MISS WATSON: Who're they?

FEARLESS FULLER: The people in his firm. Seems they couldn't get his newly-designed foil labels to adhere properly to the boxes, bags, cans, and bottles on their packaging line.

MISS WATSON: The situation sounds positively desperate!

FEARLESS FULLER: It was. That is, until I reminded them that Fuller makes a specific foil glue for each type of container.

MISS WATSON: You mean what's good for bottles may not be good for cans?

FEARLESS FULLER: Correct, Miss W. It don't mean a thing if it ain't got that cling. Fortunately, I was able to recommend some perfect Fuller adhesive solutions to his problems. Now everything's fine.

MISS WATSON: Is he alone again now?

FEARLESS FULLER: Not quite. His relatives heard how successful he was and all rushed to visit him.

MISS WATSON: Oh Fearless, you're really kooky!

FEARLESS FULLER: Perhaps, Miss Watson. But you'll have to admit there are very few adhesive problems a Fuller man can't solve.

Your Fuller man is ready with the correct solutions on any adhesive problems for you, too. Contact your nearby plant.

H. B. Fuller Co.

INDUSTRIAL ADHESIVES

St. Paul, Minnesota

St. Paul, Minn. • Atlanta, Ga. • Buffalo, N.Y. • Chicago, Ill. • Cincinnati, Ohio
Dallas, Tex. • Kansas City, Mo. • Linden, N. J. • Los Angeles, Calif. • Memphis, Tenn. • Portland, Ore. • So. San Francisco, Calif. • Tampa, Fla.
Also Winnipeg, Can. • Fuller Adhesives International, Nassau, Bahamas

Specify HINGE-FOLD®

Trademark

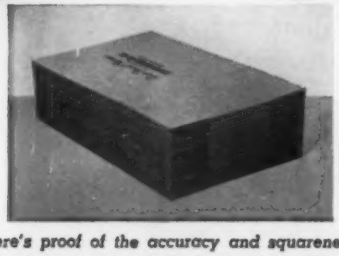
for STRONGER *Consistently Better* Corrugated Cartons

"Hinge-Fold," a new concept of corrugated creasing and folding, produces cartons which set new standards of accuracy, uniformity and strength.

Illustrated at left is the exclusive Hinge-Fold. This crease, which is in effect a dual hinge, is made by unique male and female formers in combination. The double hinge has the effect of forming the corrugated board into a column which minimizes compression of the inner liner and stretching of the outer liner when folded.

Hinge-Fold cartons have increased top-compression strength, and resist folding fractures, even when stored in dry places. Hinge-Fold eliminates the abrasion and tearing action of knife-edge creasing which have long plagued the industry.

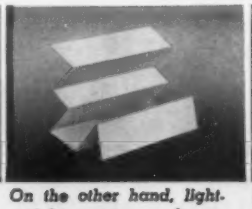
The next time you buy cartons, specify "Hinge-Fold."



Here's proof of the accuracy and squareness of cartons made with the International Hinge-Fold. Tests by Container Laboratories, Inc. proved that Hinge-Fold cartons were "Consistently better . . . in all properties measured." Write us for a copy of their report.

HOW HINGE-FOLD BUILDS BETTER STRONGER CARTONS

You can't "fold" a piece of lumber. Because of its thickness the fibres on the outside will stretch, and then fracture completely.



On the other hand, lightweight papers can be refolded many times without fracturing because there is less stretching.

Heavy boxboard must be scored to permit folding. Note how Hinge-Fold score creates dual hinges which minimize stretching.

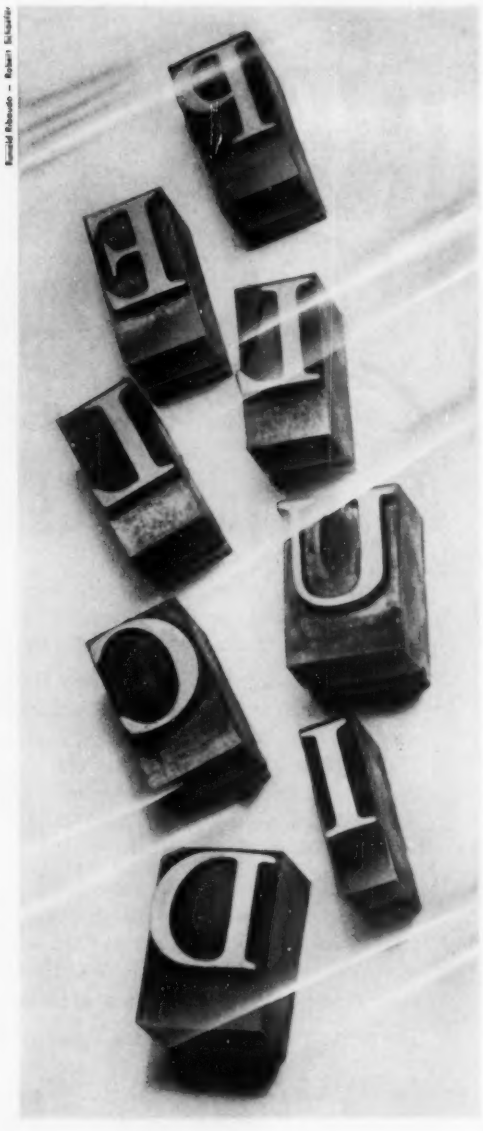
Note the stress on the upper crease made with common rotary score. Compare it with the square strain-free Hinge-Fold.

HINGE-FOLD *Exclusive with* international's **LB** corrugated gluer

The **international** PAPER BOX MACHINE COMPANY

315 MAIN STREET, NASHUA, NEW HAMPSHIRE

international machines... *Build* BETTER CARTONS



SEEING IS BELIEVING!

You are looking at this type through a sheet of EXTRUDO-FILM's new *Opti-clear* polyethylene film.

Using a new technique, EXTRUDO-FILM is introducing *Opti-clear* . . . the crystal clear, glossy polyethylene film. This new sheet is being manufactured in sample quantities now, in widths up to 72 inches. Commercial production will begin shortly.

Opti-clear sheeting is ideal for bags or overwrap, with glass-like clarity, no haze, but retaining all the desirable characteristics of low density polyethylene film. *Opti-clear* runs on *all* polyethylene bag machines and overwrap equipment and can be printed on *any* conventional film press without special inks.

To keep ahead of film changes keep in touch with EXTRUDO-FILM!

EXTRUDO-FILM efc CORPORATION

Plant No. I and Executive offices: 36-35 36 Street/Long Island City 6, N. Y.

POTTSVILLE, PENNSYLVANIA • 100 WEST CHICAGO AVENUE/CHICAGO 10, ILLINOIS

Background for Packaging

Notes, quotes and comments. An editorial feature

Growing sophistication of the American consumer raises a warning signal to some packagers who try to make the package a glamorous come-on for an inferior product. Prominent among the observations drawn by *Consumers Union* from its latest annual questionnaire answered by 150,000 subscribers is the desire for more information about packaging. "Informed consumers," says CU's editorial director, *Mildred E. Brady*, "have become keenly aware of how the use of packaging as a sales come-on for impulse buyers has resulted in misleading practices." The single highest score (54%) on subjects for which subscribers wanted "more emphasis" went to "deceptive packaging."

Packaged convenience is the major postwar trend in the food industry. The typical new supermarket now devotes 80 ft. of space to frozen foods, carries as many as 100 different mixes for cakes, cookies and biscuits, offers about 50 kinds of baby foods. One in about three of today's time- and labor-saving products was unknown only 10 years ago, says the *Department of Agriculture*.

Watch expansion of *Lever Bros.* into food field. Already bigger worldwide in food than General Foods, the parent company, Unilever, is making a major move in U. S. through introduction of "Dinner-Redy" frozen convenience foods, now appearing in Chicago. Lever Bros.' name does not appear on the wrapper, but *Chairman William H. Burkhart* says: "This is just a beginning. From now on we plan to concentrate our expansion in the area of prepared foods. . . . People (are) looking for built-in maid service. We'll supply it."

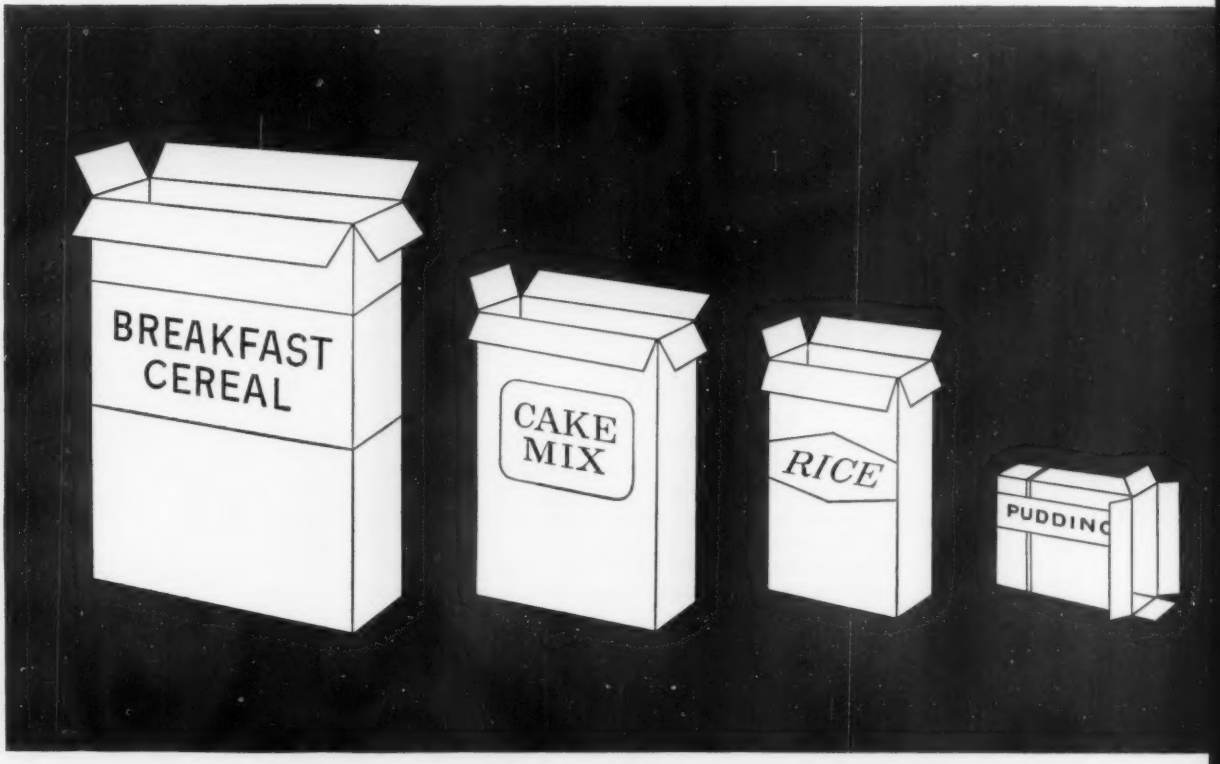
Cost of packaging pales beside cost of advertising for big companies' new products in highly competitive mass markets. According to figures quoted in *Forbes*, it cost *American Tobacco* 42 cents' worth of advertising for each of the 41 million cartons of Hit Parade cigarettes sold during 1958. In contrast, it cost the company just two cents in advertising per carton to maintain its established Lucky Strike brand among the leaders. In this type of product, highly dependent upon advertising, the break-even point comes very high.

Aluminum makes a bid for an early foothold in the European Common Market. *Nathanael Davis*, president of Aluminium, Ltd., of Canada, argued in Paris that the Common Market nations cannot reach their economic goal without an ample and low-cost supply of aluminum. He urged unrestricted entry of aluminum from Norway and Canada. Mr. Davis also disclosed that Aluminium, Ltd., and French aluminum interests are joining a consortium to produce alumina on a big scale in the new African republic of Guinea.

Competitive pressures on packagers to improve recognition of their brands in supermarkets is evident in new data reported by the *Super Market Institute*. New supers opened in 1959 are smaller in size and serve smaller trading areas than do their predecessors, although their average selling space and sales volume are greater. This trend indicates a successful effort to squeeze more profit out of less traffic. Moreover, non-food sales in the newer stores are 20% [*Continued on page 40*]

FOR THE FIRST TIME — A HIGH YIELD COATED BLEACHED BOARD . .

announcing . .



Most printed packages produced currently on lowest grade printing boards can now be upgraded to coated, 100% virgin fibre bleached board. HiYield Printkote is white on both sides and all the way through, and is produced in volume to a standard quality.

. . . . . RECOMMENDED FOR PRINTING!

. . . . . **HiYield**™ **PRINTKOTE**

Now, *with no increase in cost*, many printed packages, even those made from the lowest grades of printing boards, can be upgraded to bright cartons—*all white inside and out*—made from 100% virgin bleached fibre. Just use West Virginia's HiYield Printkote.

As its name implies, a ton of HiYield Printkote contains more square feet per ton than higher density boards and, therefore, yields more cartons per ton. Due to its high yield and strength, cartons manufactured from HiYield Printkote are comparable in cost to many cartons made from much lower printing grades of non-virgin fibre boards; however, there is no comparison in appearance and uniformity.

HiYield Printkote is another member of the family of fine Brite-Pak bleached boards. It is the economical bleached board that will prove superior in many packaging applications where cost is a major consideration and printability a factor. However, for the best bleached board, always look to West Virginia's companion grade, Brite-Pak Enamel Coat, which users say is the finest coated bleached board in its field on the market.

For detailed information on HiYield Printkote, or the accepted bleached board leader—Brite-Pak Enamel Coat—write to Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

West Virginia Pulp and Paper

Background for Packaging

[*Continued from page 37*]

higher than were registered by older supers in 1958. (See "The Supermarket: What's Happening?" p. 83, this issue.) Such retailing movements should warn all manufacturers of supermarket products that maximum packaging effectiveness is more essential than ever to keep their brands moving through the check-out counters.

The way out of a marketing dilemma is sought by textile manufacturers through packaging. Seven out of every nine textile companies, according to a survey by *Harry Lapow Associates*, want to reduce their number of product styles in the face of marketing pressure to increase them. Those manufacturers who have succeeded in reducing their number of product styles while maintaining or increasing their sales volume attribute their success to standardized and improved packaging. They consider shipping, storing and stocking convenience primary requisites in packaging.

Big question for motor-oil producers seeking new forms of packaging is the matter of high-speed filling. The plastic-sheet bottle, which has been given serious consideration, has a constricted neck which would not be adaptable to present filling lines, except at greatly reduced speed. Liquid-tight and oilproof paper-plastic cartons and plastic cylindrical cans (with seamed-on ends like metal cans) are also being studied. There is interest in this field in both polyvinyl chloride and polypropylene.

Self service for toys in variety chains, drug stores, supermarkets, etc., is a growing trend which makes packaging increasingly important to toy manufacturers, according to *Harvey E. Rath*, vice president, *A. C. Gilbert Co.*, before a recent American Management Assn. packaging seminar. "The package," said Rath, "always has been the greatest sales aid in toy merchandising, but today more than ever the toy package must effectively perform the dual function of showcasing the product as well as protecting it."

Wider scope in printing methods is sought by some large packagers, who say they find it difficult to locate a shop that will handle both large-run gravure orders and smaller offset jobs on a related carton run. Furthermore, some packagers believe the day is coming when one printing plant will employ the strong points of two or even three printing processes on the same carton; for example, combining offset pictorial with gravure line work. Some large carton plants are moving in this multi-process direction now.

More winners in folding-carton competition each year are using lithographic printing, the *Lithographic Technical Foundation* points out. In 1953 less than 10% of the winners in the annual contest sponsored by the *Folding Paper Box Assn. of America* were printed by offset lithography. In 1954 it was 12%; by 1957 it was 20%, and in 1958 no less than 40% of the carton winners were lithographic printed. While no breakdown has as yet been made of winners for 1959, recently announced (MP, April, '60, p. 106), the trend is believed continuing.

Possible roadblock in the trend toward containerized shipment of packaged goods (see "Containerization," MP, April, '60, p. 121) is growing resistance from longshoremen. Their demand for increased compensation for handling containerized shipments on and off ships has been submitted to arbitration, under agreement between the *New York Shipping Assn.* and the *International Longshoremen's Assn.*

Personnel training for packaging management is one of the needs too often overlooked in planning for expanded volume promised by the "surging '60s." *George L. Cobb*, president of the *S. H. Kress Co.*, put his finger on the problem recently when he said: "The '60s will see a race not alone for sales and profits, but a race to train qualified new people."

From Our "Ancient Order of No Men" Collection

redoubtable doubter, Thomas Squire

COULDN'T "SEE" ANOTHER SUPPLIER!

Tom Squire was no man's yes-man! He would answer "no" at the drop of a new idea; scowl at the thought of a new thought; and go berserk at the idea of a new supplier confronting him. He stood on the solid platform of keeping things as they were; and now stands on that same platform — in a wax museum!

Luckily, his ilk has been supplanted by forward-looking men such as you: open-minded and eager to learn anything of advantage concerning the packaging of your products. Hence, you would welcome Kehr into your office, in quest of what we have to offer . . . which could be anything from the solution of a particular problem up to the complete redesign of your entire packaging. Why not write or call us in while you're thinking of it . . . right now!

America's Fastest Growing Flexible Packaging Manufacturer

Kehr PRODUCTS COMPANY

535 Davisville Road, Willow Grove, Pa.
OLdfield 9-6900

Designers and Manufacturers of: Bags and Rolls from Flexible Films, Foils, Papers, and Laminates printed by the Flexographic or Rotogravure Processes.

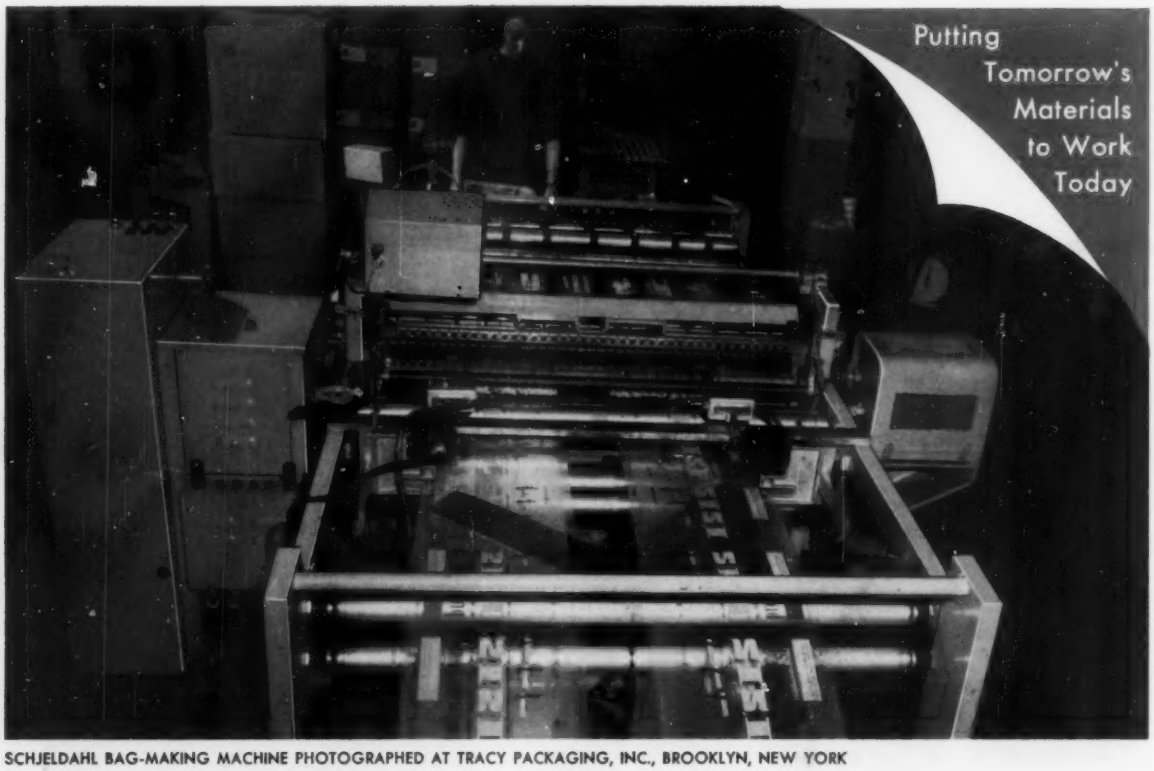
WRITE TODAY FOR *New* KEHR PLANT BROCHURE

"CANVELOPE" for PILLSBURY

An exclusive Kehr development. The properties of a can, the flexibility of a bag. Sift-proof, moisture-proof, super-strong.

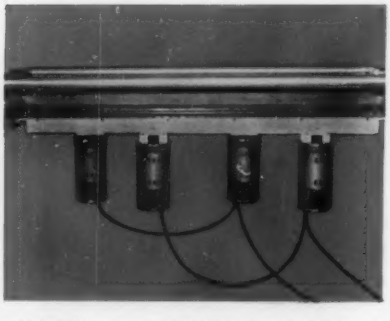
PECAN SANDIES BAG

Keebler Biscuit Company, Div. of United Biscuit Co., 40# Super Calendered outside, 300 MSD Cellophane liner.



SCHJELDAHL BAG-MAKING MACHINE PHOTOGRAPHED AT TRACY PACKAGING, INC., BROOKLYN, NEW YORK

"With Schjeldahl machines we can change jobs completely in 10 minutes"



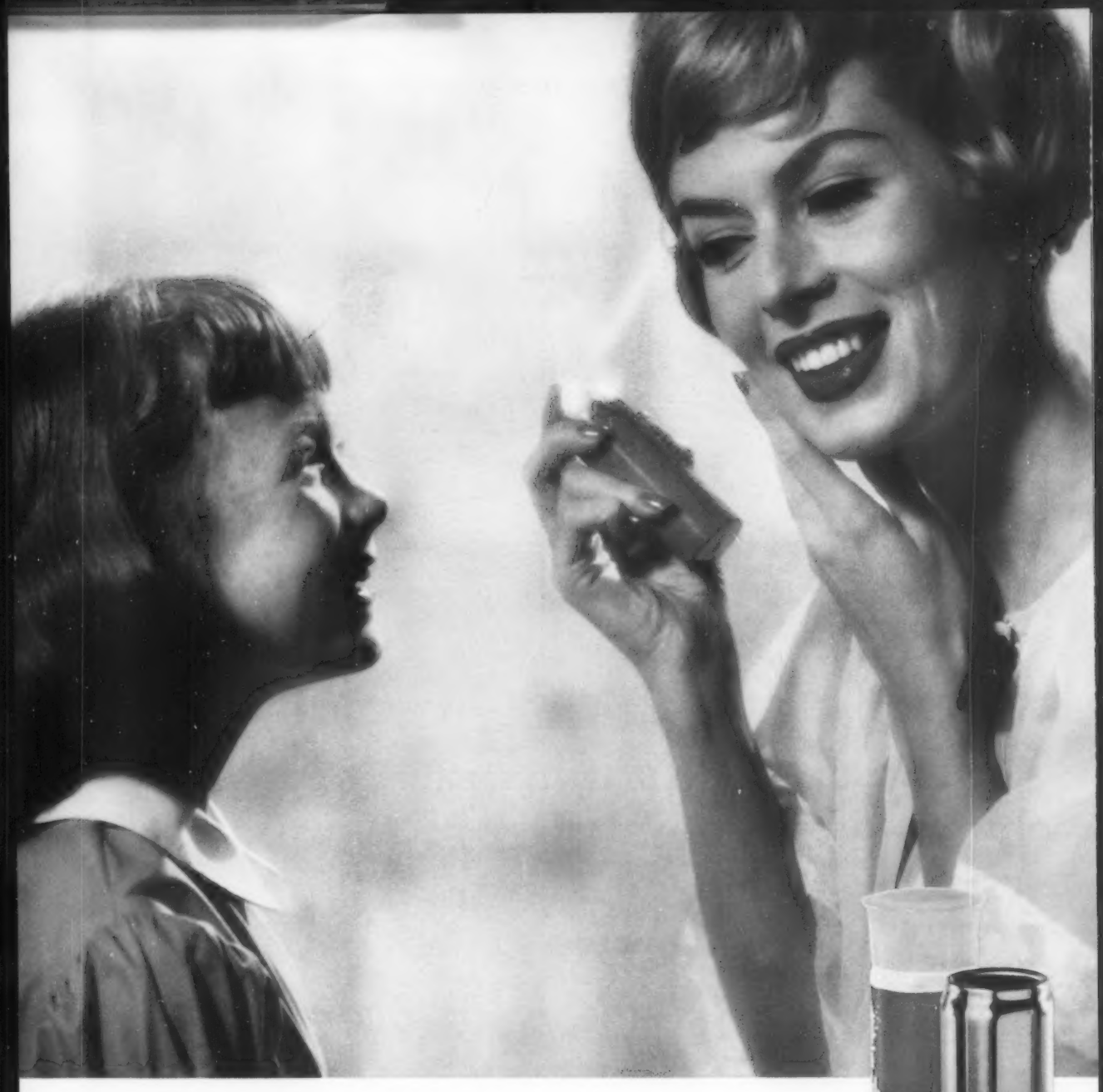
WITH SCHJELDRILL ROTARY PERFORATOR attachment, your Schjeldahl machine is perfectly equipped for specialized multiple punching jobs. The 38 drills are spaced 1" apart across bank. As many as four banks may be mounted on one frame. Drills spin for easy, non-tear perforating. 1/8", 3/16" and 1/4" drills are available and interchangeable. May be used on film, paper or foil.

"We have been running our Schjeldahl a minimum of two shifts, six days a week for nine months," reports David Mersten, president of Tracy Packaging in Brooklyn. "Our production records show an average of 2½ hours per week for maintenance and down time combined. The production record is wonderful. The other thing that pleases us is the ease and speed of set up and change over. On the average, *we can shift from single roll to split roll or change jobs completely in 10 minutes.*"

Schjeldahl machines will produce in the same fast, versatile way for you. Our model S-20T, the "Split Roll" machine, gives you up to 120 cycles per minute, produces 4 printed bags simultaneously with each cycle. It runs bags as small as 3" x 3", as large as 40" x 70", in any shape desired out of ¾ to 4 mil materials, sideweld or bottom seal.

Why not put this money-making machine to work in your plant? Write, wire or call for the facts on Schjeldahl bag-making machines and complete line of attachments and accessories.

Schjeldahl Company
Northfield, Minnesota



Today's loveliest container . . .

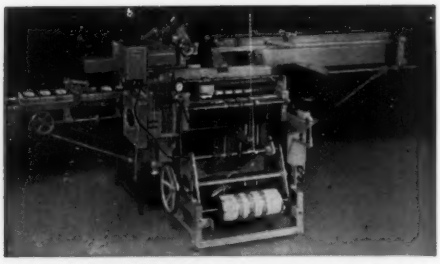
*a seamless Peerasol**

Women love this compact, lightweight aerosol. Fashioned in one piece from gleaming aluminum, Peerasol containers can be handsomely decorated in two, three or four colors over a base coat. Precise valve-cup fit is obtained by a patented process in manufacture. This means leak-proof containers, higher pressures and a high standard of quality control.

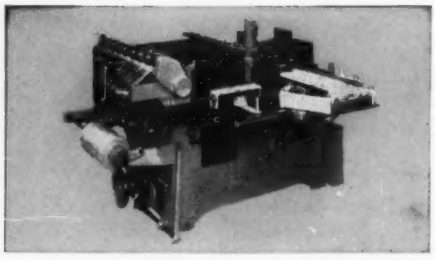
Peerasol is the smart container for perfumes, colognes, drug or pharmaceutical products. Write or call for complete information.

*PEERASOL is a tradename of the Peerless Tube Company for this one-piece, seamless aerosol with the patented lip for tight valve-cup fit.

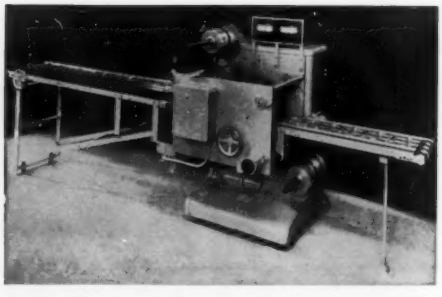
PEERLESS TUBE COMPANY, Bloomfield, New Jersey



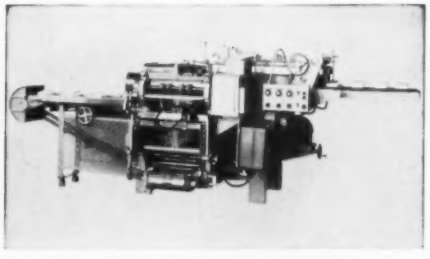
NOW YOU CAN HAVE TOMORROW'S OVER-WRAPPING MACHINE TODAY! Battle Creek's completely new Model 475 successfully handles more than 40 different formulations of soft plastic film . . . your assurance new plastic film developments will not outdate this machine. Change of films requires only electronic heat adjustment. Size changes are made in 15 minutes. Wraps up to 75 per minute within 5″ to 12″ lengths, 3″ to 8½″ widths and ¼″ to 4″ heights. Choose any of these films — polyethylene (medium, low and high density 1 mil and up), polystyrenes, heat sealing cellulose acetates, heat sealing foils, polyvinyl chlorides, cellophanes, polypropylenes or polymer coated films. **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**



REDUCE COSTS . . . PROTECT PRODUCTS . . . IMPROVE DISPLAYS . . . PROMOTE MULTIPLE SALES with Battle Creek's new Model 850 Automatic Bundler. This machine bundles groups of packages . . . 4, 6, 8, 12 and 24 to a bundle . . . at speeds up to 18 per minute. One operator can easily keep pace with a packaging line as high as 180 per minute. Depending on construction selected, the machine bundles with kraft paper, polyethylene, cellophane and other films; in bundles within 5″ to 12″ long, 4″ to 10″ wide and 1″ to 8″ high. Used for textiles, paper items, drugs, chemicals, cosmetics, food products . . . and/or what have you? **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**



CHANGE PACKAGE SIZES WITHOUT EXCESSIVE DOWNTIME! Handwheel controls for varying the pouch width, and a simple gear change for varying pouch length, — both made without disturbing the heat-sealing units — provide almost instant adjustability. Thin articles (not necessarily uniform in shape) are pouch packaged between two endless strips of heat-sealing packaging materials at speeds up to 80 per minute. Pouch sizes range from a minimum of 2″ x 2″ x 1/16″ to 27″ x 15″ x 1½″ maximum. The "Flexopaker" is especially applicable for articles in the textile, food, automotive parts, industrial products, hardware or similar industries. High speed "Continuous Flow" performance but with a low price tag. **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**



THE SOLUTION TO WRAPPING FRAGILE BAKED GOODS . . . QUICKLY, SAFELY! Battle Creek's Model 43L has been designed specifically for the bakery with the problem of packaging small bakery products . . . such as cookies, iced cupcakes, turnovers and pastries. A machine capable of wrapping from 40 to 70 packages per minute, the Model 43L handles each package gently, smoothly and quickly. Package sizes may vary from 3″ x 1¾″ x ½″ to 10″ x 4½″ x 4″. Wrapping material may be printed or unprinted cellophane, with or without separate top labels. Each package is a miniature bakery "showcase." **Battle Creek *"Continuous Flow"* Packaging Machines, Inc., Battle Creek, Michigan.**

NEW GRAPHIC ART REVOLUTIONIZES POLYETHYLENE BOTTLE DECORATING!

Dennison Therimage™ Transfer Labeling costs 50% to 75% less than silk-screening!

Multi-color decorations applied as fast as 100 bottles a minute! Two steps are involved. First, Dennison prints the decoration in reverse on the transparent heat-release coating of patented Dennison Therimage Label Paper. Then, the film-thin decoration is transferred from the paper to empty bottles as needed by an automatic Dennison Therimage Transfer Machine. No registration problems! No ink-drying delays! No losses due to obsolescence of pre-decorated bottles!

Get on the waiting list! Demand for Therimage Transfer Machines greatly exceeds current production. Deliveries are being made on a first-come, first-served basis. While you're waiting, Dennison offers a custom decorating service on orders of a million bottles or more. Interested? Address your inquiry to Therimage Division, Dennison Manufacturing Company.

Dennison *Helping you compete more effectively*

FRAMINGHAM, MASSACHUSETTS • DRUMMONDVILLE, QUEBEC

Sales offices in principal cities

TOPS FOR CAPS

... SUPER DYLAN® high-density polyethylene

These aerosol can caps for two well-known products are molded by Gilbert Plastics from SUPER DYLAN high-density polyethylene. This tough, strong plastic is durable, will not chip or dent. The unique cap design protects the spray nozzle and makes the cans easy to stack, saving valuable counter display space.

SUPER DYLAN is dimensionally stable, light in weight, rustproof, and chemically inert. It has a smooth, glossy finish and can be molded in any color desired. Its ease of molding makes it possible to create caps for any size or shape of can.

SUPER DYLAN is "tops" as a packaging material. It can be molded into bottles and jars for liquids and semi-solids—in colorful, decorative and utilitarian closures for cosmetics and pharmaceuticals—or extruded as boilable, freezable SUPER DYLAN film for food packaging. For more information, write to Koppers Company, Inc., Plastics Division, Dept. MPG-50, Pittsburgh 19, Pennsylvania. Offices in Principal Cities, In Canada: Dominion Anilines and Chemicals Ltd., Toronto, Ontario.

KOPPERS PLASTICS

KOPPERS

Molder: Gilbert Plastics, Inc., Kenilworth, N.J.

Milprint builds flexible packages to the specific requirements of your product—two layers, or a dozen if need be. At Milprint solutions to package problems are never arranged to favor a particular material or printing process. There's no need to because *Milprint offers you the widest variety available anywhere.* Your next package can benefit from this "open mind" approach by the pioneer in flexible packaging. Your custom combination package will be produced by a nationwide research, design and production organization with 61 years experience. The result? More protection, more sales sizzle for your product at economical cost. Now is a good time to discover . . .

MILPRINT PACKAGING *gives your product* MARKETING POWER

MILPRINT Inc., World's Most Constructive Flexible Packaging Service, General Offices, Milwaukee, Wis., Sales Offices and plants conveniently located across the nation.

Another FOIL packaging success with ANACONDA ALUMINUM . . .

Bright new Kraft Oil labels go glamorous with ANACONDA ALUMINUM FOIL

This sparkling new label, designed to effectively use the reflective qualities of aluminum foil, gives **Kraft Foods Division,** National Dairy Products Corporation, a stand-out package on busy supermarket shelves.

From the distinctive bold lettering against a brilliant white background to the appetizing reproduction of golden fried chicken, this label is designed to sell hard. **Art Directors Service, Inc.,** Chicago, designed this new label for Kraft Foods. It was gravure printed by **United States Printing & Lithograph,** Division of Diamond National Corporation, on laminated foil from **Anaconda Aluminum.**

Find out how foil can brighten your product's sales future by calling your nearby Anaconda Aluminum representative. And for more information about all our products and facilities, send for our new booklet, "*This is Anaconda Aluminum*". Write Dept. ML-5, Louisville 1, Ky.

When you buy foil for packaging or printing, remember . . . every industry has one member who specializes in customer satisfaction

ANACONDA ALUMINUM

ANACONDA ALUMINUM COMPANY • GENERAL OFFICES, LOUISVILLE, KENTUCKY

Deliveries expedited

with Tickometer imprinted packages—

Short stocks, small orders, and frequent deliveries are the rule these days. Service has become a major competitive factor. And order filling is increasingly complicated.

If your packaging carries mandatory data such as codes, sizes, dates, contents —you can imprint the data easily, quickly, cheaply, with a Tickometer, as orders are filled — speed delivery, save time, reduce packaging inventories and waste.

In thousands of companies, the Tickometer is used to imprint, mark, code, date or price envelopes, wrappers, small cartons, labels, bags — from several hundred to 1,000 pieces per minute. Tickometers can handle sizes from 1 by 2 to 15 by 15 inches. Easy to set and operate, feed and stack automatically, can be used by anybody.

The Tickometer also counts — orders, sales slips, coupons, forms, tags and tickets. It is so accurate that banks use it for counting currency. It will record partial totals; and can be set for a pre-determined count. With attachments it can sign or endorse checks, number consecutively, save time, speed work.

It can be bought or leased. Pitney-Bowes service is always available from 320 points.

Ask our nearest office for a demonstration in your plant. Or send for free illustrated booklet and case studies.

Model 4800 Package Imprinter

Imprints folding cartons, containers, bags, etc. up to 7,500 an hour, as needed—reducing inventories and waste. No tools required, can be operated by anybody. Ask for a demonstration, or send coupon

Pitney-Bowes

TICKOMETER

Imprinting & Counting Machine

Made by the originator of the postage meter . . . offices in 139 cities in U.S. and Canada.

PITNEY-BOWES, INC.
4834 Walnut Street
Stamford, Conn.

Send free illustrated booklet and case studies on:

☐ *Tickometer* ☐ *Package Imprinter*

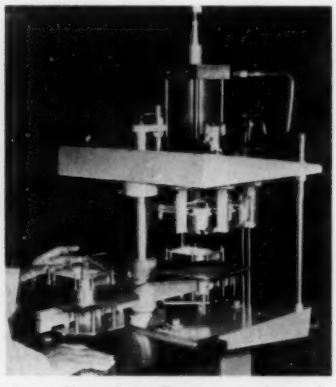
*Name*_____

*Address*_____

Equipment & Materials

Machine seals polystyrene containers

Schjeldahl introduces a machine which it claims to be the first to positively seal polystyrene covers to polystyrene containers so that the resultant seal is completely shockproof and crackproof. Heretofore, the company says, polystyrene packages had a tendency to come apart at the cover seams because of deorientation of the seals. The supplier reports that this problem has been solved by the use of high pressure and low heat in the sealing phase. Products to be packaged in the containers can be piping hot or deeply frozen. The new machine operates at 15 cycles per minute. Additional information is offered by *G. T. Schjeldahl Co., Northfield, Minn.*

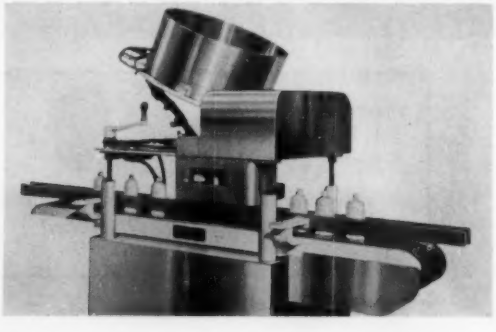


Cartons gain strength after immersion

Continental Can's Boxboard & Folding Carton Div. reports that wet-strength additives built into the company's white-lined kraft-back boxboard cartons help increase the strength of soft-drink carriers. Sample cartons were subjected to a 10-min. soaking in water. Upon being returned to normal room temperature and humidity for drying, says the supplier, the cartons demonstrated increased tear resistance, rupture strength and stiffness, even at scored corner folds. Specifically, tests showed that the board appeared to swell during water immersion, resulting in two to three points of caliper increase, lower densities and greater bulk. However, basis weights remained approximately the same. *Continental Can Co., Boxboard & Folding Carton Div., 530 Fifth Ave., New York 36.*

Plugs inserted in plastic containers

Resina Automatic Machinery reports that its new Model PB offers high-speed insertion of restriction plugs for non-pressurized soft-plastic spray containers as part of a conveyorized production-line operation. The automatic, straight-line unit is equipped with variable-speed drive, for integration into existing production lines. Stationed after the filling unit and before the capper, it inserts restriction plugs into containers having neck diameters ranging from eight to 24mm. Insertions are made at speeds of 120 per minute and more, depending on container size, says the company. Containers are gripped by the neck to prevent body collapse during plug insertion. Change-over is reported to take less than 15 minutes. *Resina Automatic Machinery Co., Inc., 572 Smith St., Brooklyn 31.*

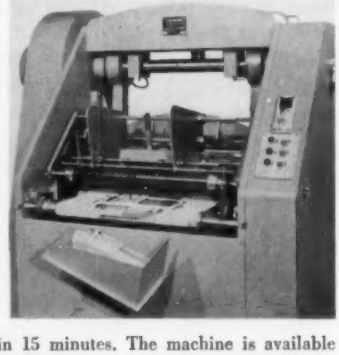


Strong, high-shrink polyethylene film

An inert irradiated polyethylene film that is claimed to be six to eight times as strong as conventional polyethylene and to shrink by 20% as soon as it is exposed to 180-deg. (F.) temperatures of air or water, is available in commercial quantities from Cryovac. After rapid initial shrinkage, the film reportedly continues to shrink equally in all directions until it returns to original size. Known as Cryovac Type L, the film is suggested for use in the contour packaging of fruits, vegetables, meat and poultry, baked goods and confectionery products. It also is suggested for standard overwrapping of packaged products. Price of the high-clarity film, says its supplier, is competitive with that of other thermoplastics. The material achieves its properties through a process of biaxial orientation which is claimed to increase film strength by more than 500% and to impart stretchability (in both directions) of more than 200%. After stretching, the film is wound on rolls. *The Cryovac Co., Div. W. R. Grace & Co., Cambridge 40, Mass.*

Metal tear-edging machine

Faustel has developed a new machine which applies metal tear edges to dispenser cartons for foil, waxed paper or other rolled material. The tear edge can be applied automatically either to the edge or one panel back of a carton blank. Edge-applying speeds of up to 150 cartons per minute can be achieved, says the supplier. Change-over from one type or size of carton to another reportedly can be accomplished within 15 minutes. The machine is available in two models. Series C is capable of handling carton blanks from seven to 24 in.; Series D accommodates blanks from eight to 30 in. *Faustel, Inc., Butler, Wis.*

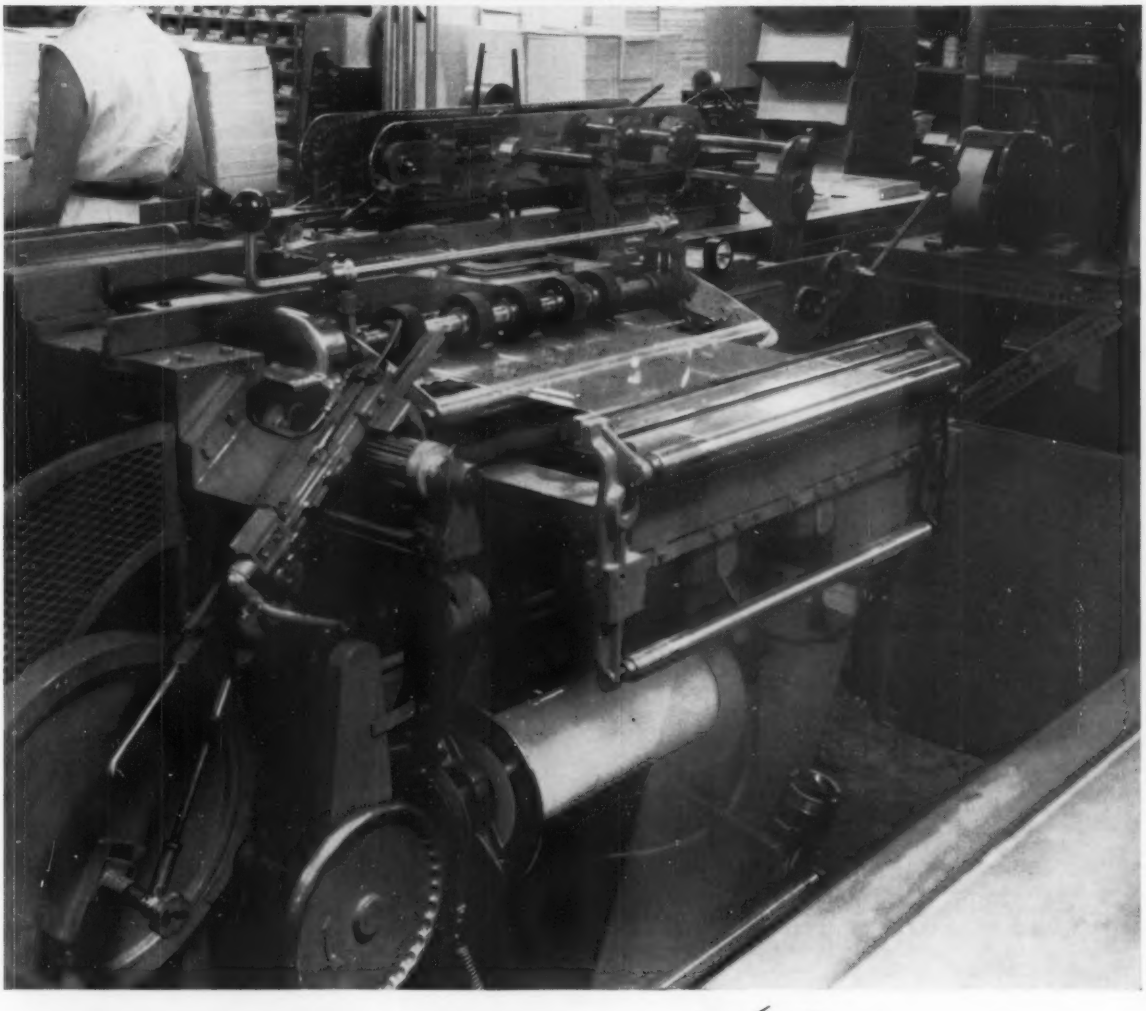


Ink rollers require no ink fountain

Several major suppliers of imprinting equipment have adopted S. C. Johnson & Son's "Porelon" to replace conventional ink-roller material and ink reservoirs. The new ink-roller material is a microporous, microreticulated plastic. Ink supply is an integral part of the new material; it is mixed with the liquid resin and a plasticizer prior to molding of the ink roller. As the ink is removed from the surface of the roller, it is replenished by the liquid inside redistributing itself through the microporous plastic.

One of the companies using the new material is *Bell-Mark Corp., 92 S. Sixth St., Newark 7,* which has adopted

"The more uniform the film—the more economical it is on the Hayssen 120 automatic machine



THAT'S WHY WE SPECIFY VisQueen FILM

Trade Mark

"We get maximum speeds—more production. Downtime is virtually eliminated. The film comes smooth and wrinkle-free. Really *flat*.

"And at point of sale, VISQUEEN 'Q' film gives our 'Nifty' loose leaf filler the visibility and sparkle that helps sell faster. The soft, luxurious feel of the film merchandises the quality of the product to best advantage."

M. L. Berlinger, General Manager
Nifty Tablet Mfg. Co.
Houston, Texas

AUTOMATICALLY—IT'S 'VISQUEEN' FILM: *the polyethylene specially formulated and manufactured for automatic packaging . . . and quality controlled from basic resins to finished product by pioneer producers.*

VISKING COMPANY

UNION CARBIDE

PLASTIC FILMS, **VISKING COMPANY**
6733 West 65th Street, Chicago 38, Ill., Dept. H5

VISKING, VISQUEEN and UNION CARBIDE are registered trademarks of Union Carbide Corporation.

"Porelon" ink rollers for the Bell-Mark Coder. The supplier reports that the ink roller delivers more than 100,000 sharp impressions without inking. *Thomas Engineering Co., Skokie, Ill.* (whose coding equipment is distributed by Bell-Mark), also has adopted the material for ink rollers on its line of coders. Another supplier using the new material is *J. L. Ferguson Co., Joliet, Ill.* The company has adopted the new ink rollers for application to Packomatic case-coding, imprinting and numbering equipment. The supplier reports that the ink-impregnated medium eliminates hand inking, flooding, smudging, gum-ups, type cleaning, ink, ink reservoirs, felts and solvents. When the ink roller is dry, it can be slipped off and replaced in a few seconds. The company reports also that the new microporous plastic rollers are low in cost. For more information on "Porelon," contact *Porelon Enterprise, S. C. Johnson & Son, Racine, Wis.*

High-yield, coated bleached board

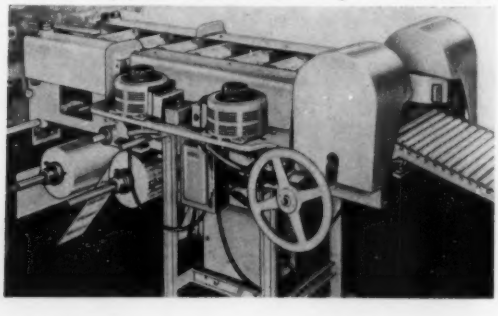
A high-yield bleached board with a coated surface recommended for printing is available from West Virginia Pulp & Paper. Called HiYield Printkote, the new board is said to be comparable in packaging cost to cartons made of lower printing grades of non-virgin fibre. This is so, the supplier reports, because the new board yields more cartons per ton than higher-density boards. More detailed information on this material can be obtained from *West Virginia Pulp & Paper Co., Bleached Board Div., 230 Park Ave., New York 17.*

Expansion of plastics marketing

Phillips Chemical is expanding its plastics activities to include the marketing of medium-density and low-density forms of Marlex polyethylene resins. The material currently is available in high-density form. One reason for the expansion program, says the supplier, is the increasing use of plastics in packaging. Both the medium- and the low-density polyethylene resins will be made from ethylene produced by Phillips and converted at the National Distillers & Chemical Corp. plant in Houston, Tex. Initially, 14 of the new resins will be made available, with more to follow. *Phillips Chemical Co., Bartlesville, Okla.*

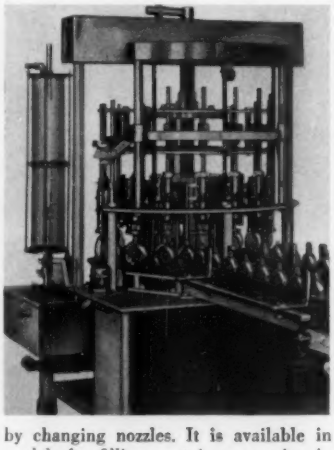
Polyethylene bread-wrapping sealer

New from Fabricon Products is a bread-wrapping-machine convertor that is claimed to achieve rapid, positive sealing of polyethylene film. Called Fab-Wrapper, it is designed for use with AMF wrapping machines, models 3-22 and 3-121. The new unit incorporates mobile heating elements built into an endless conveyor belt. As wrapped loaves come off the wrapping machine, they are "cradled" by the heating elements, which apply slow, uniform heat to all closure points. Loaves remain pressed against the elements from 7 to 9.5 seconds, to assure secure end and bottom seals. Use of mobile heating elements rather than stationary hot plates, says the supplier, eliminates burn holes or imperfect closures which may occur when extremely high temperature is applied in rapid sequence. The unit, which can seal one-mil polyethylene, can be adjusted for tight seals under end labels or for spot sealing. It can handle waxed paper and cellophane as well as polyethylene. Further details are available from *Fabricon Products Div., Eagle-Picher Co., River Rouge, Mich.*



Liquid filler handles plastic bottles

Designed for high-speed handling of odd-shaped glass or lightweight plastic containers is MRM's new Rotary Automatic Pocket Filler. The filler can be geared to any production line and is capable of filling up to 200 containers per minute, says the manufacturer. Elimination of standard stars and guides is credited with enabling the machine to handle odd-shaped, odd-sized containers at production speeds. Accommodating foaming or viscous liquids, the unit can be switched to vacuum, gravity or pressure operation by changing nozzles. It is available in eight- or 16-spout models for filling containers ranging in capacity from less than an ounce to a gallon. Containers to be filled are separated alternately on an endless chain conveyor, which reportedly prevents toppling and interlocking common to lightweight plastic or narrow-based bottles. A timing system synchronizes bottle separation with container movement and filling. *MRM Co., Inc., 191 Berry St., Brooklyn 11*



High-capacity extrusion equipment

A new series of heavy-duty, high-capacity extruders—reportedly designed to meet the needs of new plastic materials and extrusion technology—is being marketed by Hartig. Machines in the new Trapezoidal series feature high screw speed, maximum input and high extrusion pressures, says the company. Also featured is a new gear-box design claimed to offer increased thrust bearing capacity, internal lubrication, higher thermal ratings and elimination of auxiliary cooling. The new series of extruders is available in screw sizes of 2½, 3½, 4½ and 6 in. *Hartig Extruders Div., Midland-Ross Corp., Mountainside, N.J.*

Static eliminator with transformer

A static eliminator which features printed-circuit construction and an individual midget transformer has been developed by Herbert Products. Called the Curastat, the device is claimed to be effective for use with any static-prone packaging material. Elimination of high-tension wiring provides a new safety factor and installation convenience, says the supplier. Static-eliminator bars are available in lengths ranging from 2 to 92 in. The transformer measures 4½ by 4 by 3½ in. Further details are available on request to *Herbert Products, Inc., Westbury, N.Y.*

Protective new multiwall bag

Union Bag has begun commercial production of Uniseal—a completely heat-sealed multiwall bag that is claimed to be both liquid-tight and air-tight. Said to be low in cost, the bag is suggested for use in the packaging of hygroscopic, corrosive, semi-liquid or other hard-to-protect products. The bag is designed to hold up to 100 lbs. of product. It is constructed in tube form from two to six plies of [*Continued on page 154*]

why do men who operate automatic packaging machinery choose VERTI-PAK

Mercury Automatic Packaging Machine

FORMS . . . FILLS . . . SEALS

Verti-Pak in one continuous operation weighs this less than ½ ounce package, forms and fills it with 300 NuAce corners(plus 8 max. no minus)and seals it . . . all automatically.

The unique Mercury scales on the Verti-Pak machine provide highest accuracy in weights from fractions of an ounce to several pounds with complete efficiency and consistency . . . resulting in substantial savings in the packaging of such wisp-weight items.

MR. FRANK L. SPUR

Production Mgr. of
Ace Art Co. says:

"Since installing the MERCURY Packaging Machine our production records are showing a two-way pay-off. Material costs are down 50%, production is up 50% over our former packaging methods. All this with a maximum of operating ease and a minimum of maintenance due to MERCURY'S simple, compact construction. What more can I say!"

SEND US A SAMPLE OF YOUR PRODUCT TODAY!

We'll determine which stock MERCURY machine will serve your needs best. For special problems we will modify a standard machine. Finished samples will be submitted for your consideration.

MERCURY HEAT SEALING EQUIPMENT CO.

2601 N. HOWARD ST • PHILA. 33, PA.

M-2603

TOUGH PACKAGING JOB?

Read how you get transparency and strength

with laminations made with Du Pont MYLAR*

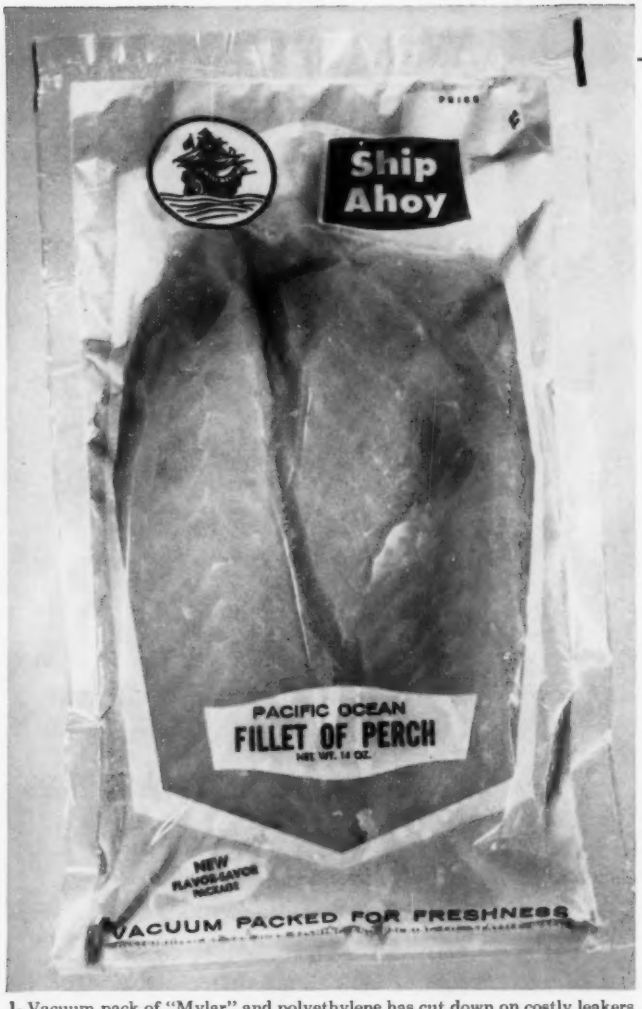
The packages shown here are examples of how laminations and extrusion-coated structures made with Du Pont "Mylar" polyester film can handle the tough ones! Because "Mylar" offers these special advantages: sparkling transparency . . . fantastic strength and puncture resistance . . . indifference to heat or cold . . . great machinability . . . won't ever warp, crack, embrittle or yellow with age.

And "Mylar" can be used in combination with a variety of films and coatings to produce a structure with the *amount of strength* your product needs.

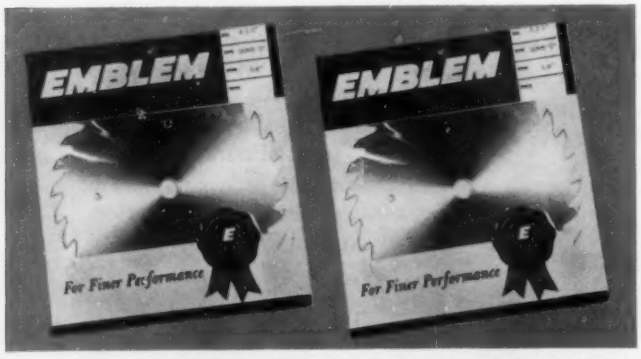
The man to see: Your Du Pont Authorized Converter†. He'll tell you how laminated or coated structures of "Mylar" can cut your costs . . . give you added shelf life . . . open new distribution channels for you. He can supply these combinations as roll stock or pouches.

†For the name and address of Authorized Converters or for added information about "Mylar", just write to: E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.

*"*Mylar*" is Du Pont's registered trademark for its brand of polyester film.*



1. Vacuum pack of "Mylar" and polyethylene has cut down on costly leakers for San Juan Fishing & Packing Co., Seattle. "Mylar" stays strong through freezing, shipping and store handling.



2. New heavy hardware package of "Mylar" and polyethylene bonded to cardboard gives Chicago Saws, Inc., Chicago, Ill., tremendous resistance to puncturing from jagged saw teeth. Cardboard boxes and unsupported film bags previously used weren't tough enough to do the job.

3. Heat-in-bag pouch of "Mylar" and polyethylene lamination is getting wider distribution for Patio Foods, Inc., San Antonio. "Mylar" is ideal for this use because heat or cold can't affect it.

DU PONT MYLAR® POLYESTER FILM

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

another new STRETCH-PAK T.M.
display package

BY NEVINS

Captured in transparent film, this bottle seems as if by magic to be suspended within the window of the STRETCH-PAK display package which will stand on a counter or shelf or hang on a peg. The film tight wraps front and back bottle contours providing an effective seal adding no additional reflections in critical areas which would tend to reduce product and label visibility. Printed and manufactured by The Nevins Company these packages offer a most modern and unique way of inviting sales.

All information regarding STRETCH-PAK packages and packaging machines thereof may be obtained from Stretch-Pak Division, The Nevins Company, Clifton, New Jersey.

The new Nevins plant is a twenty minute drive from New York City, directly west of the Lincoln Tunnel on Highway 3. Approaching from the west, it is about one-half mile east of the Bloomfield-Clifton turn-off.

Since 1902 — Designing, Printing and Manufacturing
Labels, Folding Cartons and Display Containers

THE NEVINS COMPANY

Sales Offices: Clifton, New Jersey and Boston, Massachusetts
Executive Offices and Plant: 800 State Highway 3, Clifton, N. J.

The Mark STRETCH-PAK is a Trademark of The Nevins Company ★ Reg. U.S. Pat. Off. by trademark owner, Miles Laboratories, Inc.

IF IT CAN BREAK, BRUISE, CRUSH OR SCRATCH—PANTA-PAK IT!

Low-Cost PANTA-PAK custom-formed packaging delivers your product in perfect condition.

PANTA-PAK plastic containers are molded to the exact contours of your product. They cradle it. Hold it gently, but *firmly*. Because PANTA-PAK material can be varied from tissue-thin to extra thick—*within the same unit*—your product gets soft cushioning or rigid strength exactly where it's needed most.

PANTA-PAK is *economical*. Your labor costs are lower because it fills faster, handles easier. Better protection reduces your product losses. And you save on freight costs, too, because PANTA-PAK is lightweight.

PANTA-PAK can be made as an interior tray or as a completely self-contained package. Five lively colors add eye-appeal—make striking point-of-sale displays. And the smooth, sleek contours of PANTA-PAK give your packaging a *quality* look. F.D.A. approved, too!

For free samples and further details, write PANTA-PAK Division, Pantasote Co.

PANTA-PAK can be custom-molded to fit almost any product—holds it gently, yet firmly.

panta-pak®

DIVISION OF **THE PANTASOTE COMPANY**

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Chicago, Ill. • Los Angeles, Calif. • Passaic, N. J.

For a new perspective, look at this illustration from across the room.

Crossett Machine Time Plan – new perspective on purchasing paper

"For fourteen hours every month," one Crossett customer likes to say, "I own this paper mill." This is virtually what happens with each of Crossett Paper Mills' regular customers. Each has specific amounts of *machine time* reserved each month for his specific requirements.

The Crossett Machine Time Plan means that Crossett customers can count on getting paper precisely as and when ordered—and always at a fair price.

Crossett Leatherneck Wrapping Paper. Consistent quality in all weights, weight-controlled for customer savings.

Crossett Leatherneck Converting Kraft. Custom-produced to the exact weight and quality needed. Basis weight control assures predictable yardage per ton. Crossett Technical Service available to customers.

Crossett Food Board. Cylinder machine production places long and short fibers precisely where needed for every packaging and printing requirement. Crossett Technical Service helps with customer problems.

Crossett
PAPER MILLS

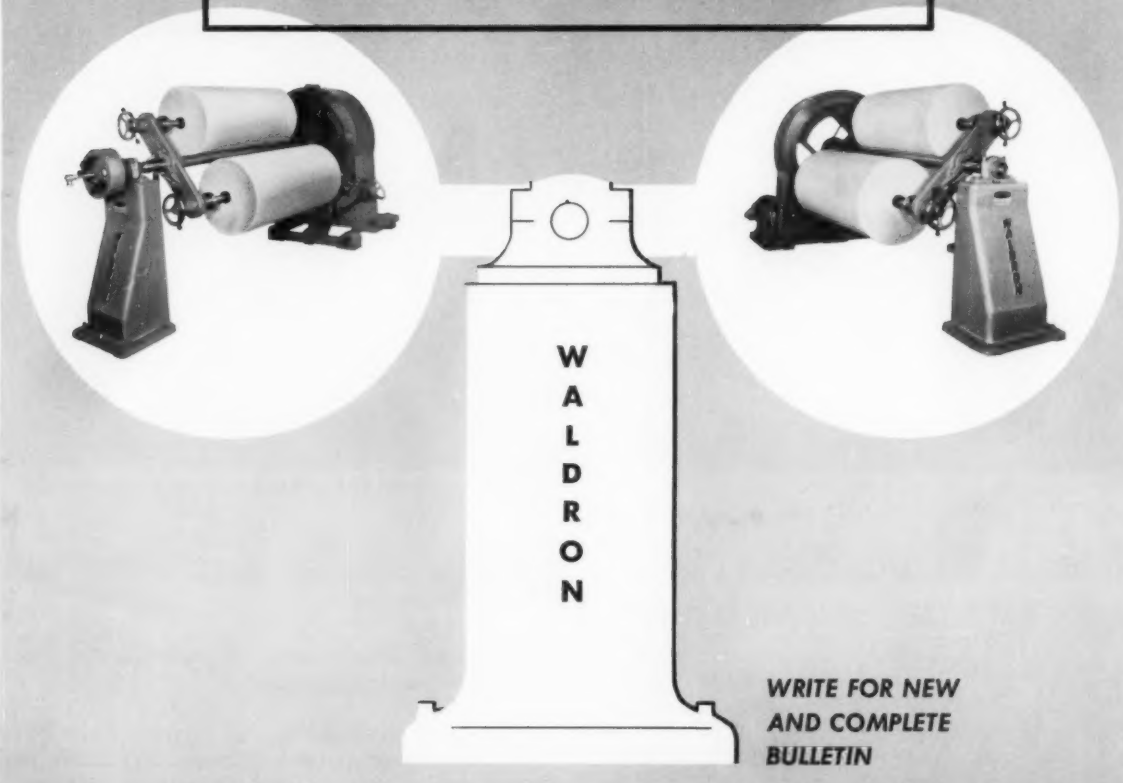
A Division of The Crossett Company, Crossett, Arkansas, makers of paper, lumber, charcoal and chemicals. All from managed forests.

WALDRON

'TURNAREEL' Series

a new and advanced line of continuous

UNWINDS and WINDS



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LEADER IN WEB PROCESS ENGINEERING SINCE 1827

WALDRON-HARTIG DIVISION

MIDLAND-ROSS CORPORATION

NEW BRUNSWICK, NEW JERSEY

MT. PROSPECT, ILL. • LOS ANGELES

WEST COAST REPRESENTATIVE: BOJANOWER MACHINERY SERVICE CO.

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Unique shape possibilities. Only Tulox gives you practically unlimited choice of attractive container shapes and sizes in the basic sections shown here.

Unique color and styling possibilities. Tulox can be sparkling crystal clear or brilliant in colors of the rainbow . . . plain or decorated in exciting new ways.

Unique ability to fit your product needs . . . not only in size and shape but also in material and packaging "mechanics."

Unique marketing and merchandising abilities. Tulox can indeed help you all the way, from reduction of production costs to giving your customers a more appealing product.

Unique low cost. Tulox exclusive processes result in remarkable economies on volume runs . . . often permit packaging cost reduction 'way below that of less attractive alternatives.

These are just some of the reasons why we urge you to investigate Tulox as a means of giving your present products new competitive punch and your new products every competitive advantage.

is your product different?

TULOX®

versatility

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NEW TULOX POLYETHYLENE CONTAINERS

for special applications in the drug, food and allied industries. Lightweight—low cost—unbreakable—treated for labeling or decorated. Ask us about the possibilities of this NEW TULOX packaging.

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General Offices: Norwalk, Connecticut • Plants: Norwalk, Connecticut • Marion, Indiana

4EP59R

CREATIVE PACKAGING FOR HER...
by WIRZ

The convenience. The wonderful variety of shapes and sizes. The colors and textures . . . and decorating possibilities. The sales appeal! The advantages *of packaging your product for* her*—when you package it in a plastic bottle by Wirz.*

Consider plastic bottles by Wirz for your cosmetics and pharmaceuticals. Also for a wide range of household and industrial items. Choose from a selection of standard shaped containers, or let Wirz create an exclusive design *for you.*

Wirz packaging specialists work wonders with plastics . . . and with collapsible metal tubes which they introduced in this country nearly a century ago. Let a representative acquaint you with all *the advantages of Wirz plastic bottles, collapsible metal tubes and special extrusions.*

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4TH & COLE STREETS, CHESTER, PA.

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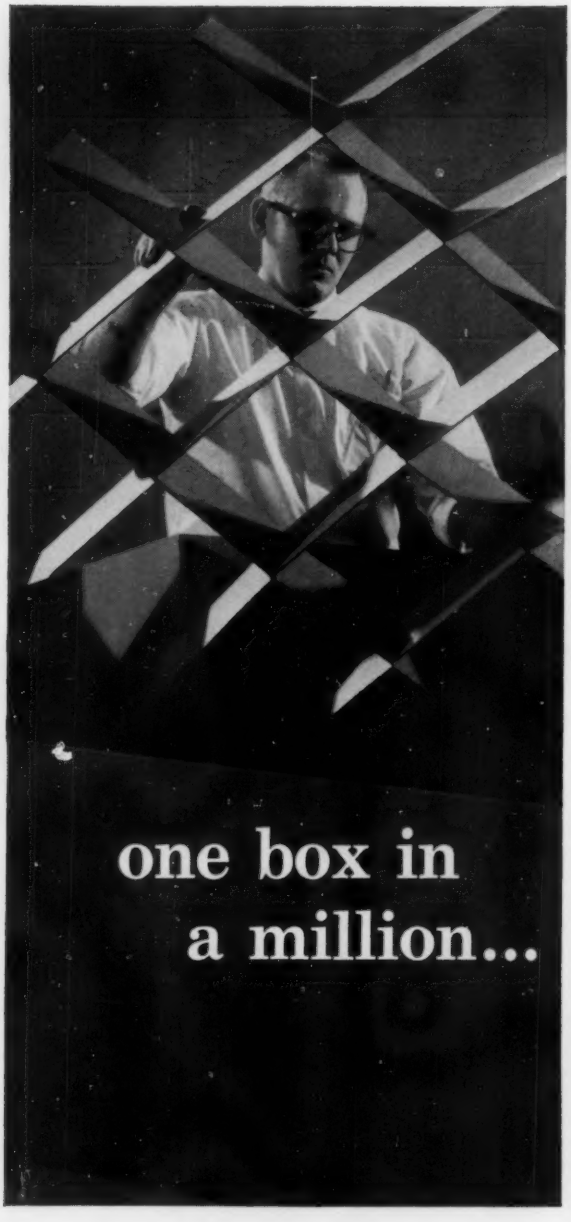
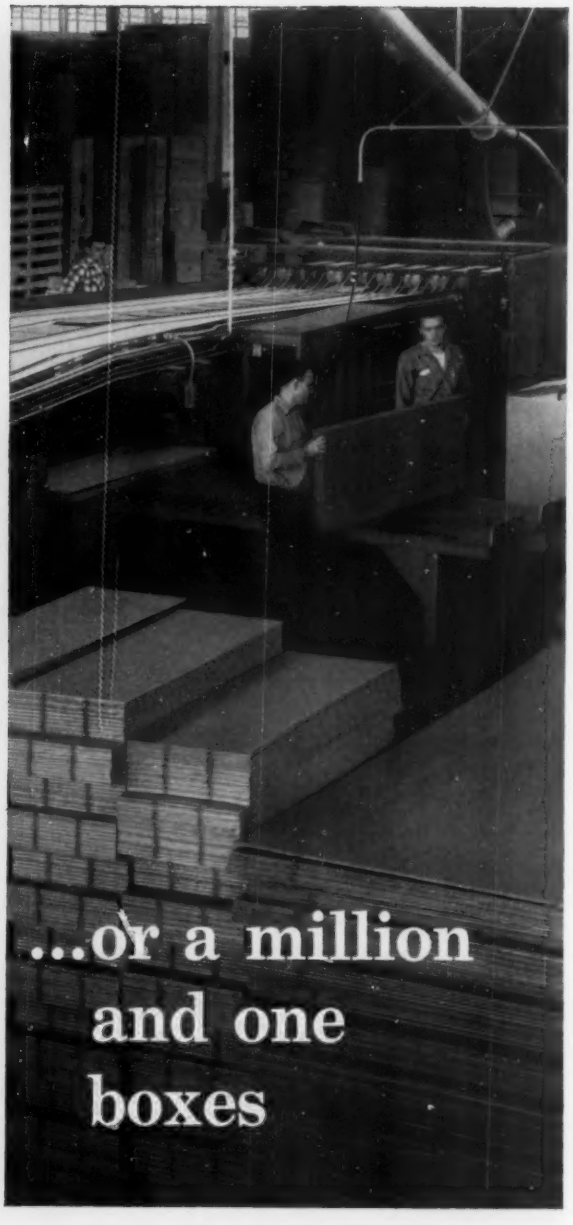
RIGID CANS AND IMPACT EXTRUSIONS . . . AMERICAN EXTRUSION DIVISION, BROOKLYN, N. Y.

Another packaging problem solved...
with a
MADE-TO-ORDER LAMINATION
at no extra cost!
Developing a packaging material that would keep fresh shrimp fresh for 14 days was not easy — but it was solved* by the scientific approach with which Modern Packaging Company attacks every packaging problem — whether in food, apparel, hardware, cosmetics or whatever.
Extruding and laminating custom-made packaging material in rolls, wraps and bags is our specialty—and we supply a long and diversified list of important customers.
It costs no more to have your packaging material custom-designed and formulated for your product. It will have greater clarity, better machineability, better adhesive quality, better performance on your automatic machines—and at the point of sale. Our representative will gladly call on you and tell you more.
If you are interested in how laboratory research is used to develop packaging, write for free laboratory research reports on our shrimp package, luncheon meat package, and liver package.
MODERN packaging company
Mount Holly, New Jersey
CONVERTERS AND EXTRUSION LAMINATORS OF FLEXIBLE PACKAGING MATERIALS





Perhaps you need a completely new type of corrugated package, for a product that requires ingenious container design. If so, you'll benefit from Hinde & Dauch's *creative approach* to package engineering. Or maybe you use standard shipping boxes in great quantity. In that case, you can count on H & D's large volume capacity—more than six billion square feet per year—to keep you supplied for uninterrupted production.

Hinde & Dauch Division

West Virginia Pulp and Paper

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Sounding Board

WE ASK THE READERS

Which packaging development of the '50s do you consider most significant? Which is most important to you?—Part 2

This provocative question produced so many responses that we have had to publish the answers in two issues. The first group of replies appeared in our April issue, page 67. Following are the remaining answers:

R. E. Wheeler
Assistant Production Manager
Economics Laboratory, Inc.
St. Paul, Minn.

We believe that the development of the plastic bottle was one of the most significant in the past decade. It has advantages for both manufacturer and consumer. The manufacturer can attain such advantages as lower breakage factor, less production-line clean-up formerly prevalent because of the susceptibility of glass breakage, and freight savings as compared with the heavier glass bottle. The consumer can avail himself of a more attractive and appealing package that has the same breakage-factor advantages. While we realize that this development has led to many problems in filling and labeling, we nevertheless feel that these will be worked out over the coming months and that the plastic bottle will assert itself more completely in the future.

The most important packaging development of the past decade, as applied to our company, was the development of the foil overwrap. This development has allowed our company and other manufacturers to package products for the consumer that contain materials susceptible to decomposition, moisture pick-up, etc. This has meant that a more desirable product is now available through the use of the foil overwrap as a protective layer over a package.

LeRoy D. Connell
Merchandise Manager
J. Wiss & Sons Co.
Newark, N.J.

The graphic perfection, color control and design flexibility supplied by the majority of the folding-box manufacturers has not only provided an exciting appearance for consumer packaging, but has decreased costs over earlier methods, particularly for the small user of packaging.

It was seemingly very difficult, 10 or 15 years ago, to take a package designer's comp or rendition and hand it over to a box manufacturer and have the box produced in replica. The flexibility of various paperboard liners, etc., has made it possible to package hardware items as gloriously as plus items in the cosmetic, food and drug fields.

With the board strengths that are available today, products are now packaged with less cube, which has decreased carton costs and shelf or storage space. The flexibility of combining runs and other pressroom short cuts provides top-notch packages at far less money than was possible 10 or 15 years ago.

The most important advantage of the folding box to our company has been flexibility of coming into the market with a constant flow of new packages, not only from the standpoint of surface art, but control of size.

And, in this ever-changing consumer theater, this year's folding box can be a window box and next year's can be a standard reverse-tuck box with product attached to a sleeve or point-of-purchase display card. In other words, a two-element combination package.

Where else can you get your design flexibility except from the folding-box manufacturers?

Hugh F. Crawford
Production Control Manager
Plough, Inc.
Memphis

The development of the use of plastics, in my opinion, is the most significant factor in packaging during the "Fifties." While back in the "Twenties" and "Thirties," a consumer package change was seldom made and then not a radical one—and during the second war package changes were almost impossible—the "Fifties" was an age when changes in packages came to be demanded. These changes were in both appearance and and utility, and the public was fascinated. Many times these changes were accomplished by the use of plastics and this great demand forced a great development.

Many new kinds of plastics have been developed and

plants have been built to produce them. The more commonly used now have had production expanded and improved so much that their cost is dropping steadily. The new kinds of plastics are rapidly enlarging the field of use. Almost anything can now be packaged in a plastic container.

The equipment to produce, form, mold and label for displays, bottles, tubes, jars, etc., has been improved greatly, but does not keep pace.

It seems to me that a cheap plastic shipping case for multiple-pack shipping, sealed with heat, is within reach in the near future.

Here at Plough, Inc., our packaging covers a wide range, some of our products being Coppertone, St. Joseph Aspirin, Inco Shellac, Mistol, Musterole. We also package for Italian Swiss Colony Wine. Our interest in quality improvement and cost reduction makes us watch the entire field of plastics constantly.

Anton P. Tinnesz
Senior Engineer
Western Electric Co.
Kearny, N.J.

In my opinion the most significant packaging development of the past decade in over-all importance to the Western Electric Co. is improvement of corrugated board, notably the new multiple-wall corrugated.

In view of the introduction of so many new packaging materials, this might lead to the belief that Western Electric's packing methods are archaic, since corrugated has been around for a long time. This is not so, however. Many of the new materials have been adopted at Western Electric, such as expanded polystyrene, molecular rubber, rubberized hair, polyethylene and some foams. A number of very workable and time-saving automatic machines have been purchased and are in operation too, such as carton loaders, sealers, packagers, etc. All have proved their worth.

In spite of this, however, the most significant developments have been in corrugated due to several new small die-cut corrugated cartons recently designed and adopted and, most important, the application of high-strength, multiple-wall corrugated board to jobs heretofore undreamed of as adaptable to corrugated.

Why significant? Because of the cost reductions effected in both packing labor and materials, as well as reduced storage space and shipping charges. Any good packer can pack an item adequately for safe shipment, but the No. 1 duty of a packaging engineer is to get the product to its destination safely at the *lowest cost*. The packaging engineers at the Western Electric Co., Kearny, N.J., have effected cost reductions averaging $100,000 a year for the last decade. Thus $1 million on redevelopment of existing packaging designs alone was realized. This does not reflect reductions in packaging costs when applying the new concepts to newly designed equipment. This would result in at least another significant $1 million!

Lloyd L. Pair
Production Control Manager
The S. E. Massengill Co.
Bristol, Tenn.

The most significant packaging development of the past decade is the progress made in the development, production and use of plastics in packaging.

Since there is a great variety of plastics materials, each having distinct physical and chemical characteristics, their potential for packaging is tremendous.

During the past few years plastics have replaced some of the conventional packaging materials. However, I believe that the greatest potential for the application of plastics materials lies in their use to create new and unique package designs.

Our company manufactures more than 600 pharmaceutical products, most of them for prescription use only. The packaging requirements for most of these products are somewhat conventional.

We use some polyethylene squeeze bottles with spray tips for nasal-spray products and similar bottles for the insufflation of a veterinary powder. Also, we have used plastic disposable syringes for penicillin products and some larger polyethylene syringes for veterinary mastitis products. Recently we began using polyethylene pipettes for our dropper assemblies for dropper bottles. Clear polystyrene hinged-cover boxes are used for some packages. We use polystyrene vials of various sizes and glass vials with polyethylene snap caps.

The development most significant to our company during the past decade has been in the field of plastic films. We use fairly large quantities of several of the new film laminations for strip-type sample packages. Several new films and laminated combinations are better moisture and vapor barriers than were available a few years ago. The heat-seal characteristics also have been improved. Converters have developed new processes for the production of thinner and more uniform films and better laminations of them.

Lee R. Forker
Executive Vice President
Quaker State Oil Refining Corp.
Oil City, Pa.

Several package developments have occurred in the past decade which are significant and worthwhile.

Although beer cans were used before the last decade, their use increased so much in the last few years that they now use in excess of eight billion per year, or approximately one in every five cans manufactured. Cans for carbonated beverages or soft drinks are new within the last few years and, since their development and proven acceptability, their volume has been tripling or quadrupling each succeeding year. They are shooting for a potential of 16 billion cans per year due to the tremendous possibility of their marketing in chain stores, etc., because no return or breakage is involved.

A great future in pack- [*Continued on page 191*]

designer's choice papers by wyomissing...

you don't need a ball bat to make an impact

IMPACT

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Ideal for gravure, offset, letterpress . . . GEMCOTE assures true no-dot-miss halftone reproduction. It folds well . . . is ideally suited to transparent inks . . . is available in white and ivory.

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Now... new packaging protection for a wide range of products

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Here's real packaging news. For industrial parts . . . for food . . . for soft goods . . . for fragile and semi-fragile products . . . for any product requiring protection from either temperature or shock . . . the new Boyertown Bag offers the fastest, easiest method of packaging —the surest, safest type of protection. Can be used as a complete mailing unit or for packing in cartons or boxes.

- Cushioning and Insulation—Heavy, full-bodied macerated material acts as shock-absorbent cushioning for protection from roughest kind of handling. It assures long-lasting protection against temperature changes and also acts as an excellent moisture vapor transmission barrier.
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YOUR PRODUCTS LOOK BETTER . . .
TRAVEL BETTER . . . IN A *Boyertown Bag*

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Bags are Boyertown's Business

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Thermatron's packaging engineers will prove that you can add electronic automation to your present or future Blister Packaging operation! Thermatron's new Blister-Lok® system makes possible the automation of multiple units and is easily the fastest, most economical method of blister packaging! Your product becomes tamper-proof, moisture-proof, visible and durable because the vacuum formed plastic welds to itself or a cardboard, is even capable of holding liquids. Thermatron equipment is built to package every product from the smallest electronic components to hardware. Call or write Thermatron's Engineering Department.

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ELECTRONICS DIVISION OF WILCOX GIBBS

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Oneida puts "control"
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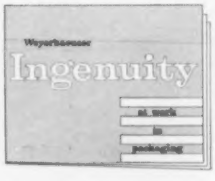
CONVERTERS AND COLOR PRINTERS OF QUALITY PACKAGING from: Glassine, Cellophane, Polyethylene, Kraft, Foodservice, Foil, Kraft Board, Coated and Laminated Stocks

If there were a popular demand for butterfly wings, Weyerhaeuser Ingenuity would package them to give you a selling advantage.

Weyerhaeuser knows packaging literally from the ground up—from the tender shoots of tiny saplings to the whims that ring cash registers. Weyerhaeuser tree farms and pulp and boxboard plants supply the carefully controlled raw materials with which merchandising-minded specialists work in creating ingenious sales-building inducements to shoppers.

At Weyerhaeuser, knowing *what* folding carton to make is just as important as knowing how best to make it for convenience and economy to users . . . unquestioned product protection . . . enthusiastic approval by distributors, dealers . . . compelling visual appeal. Working as a team, the ingenious Weyerhaeuser group welcomes challenging packaging problems.

To get this advanced thinking in *your* folding cartons, write or phone Weyerhaeuser.



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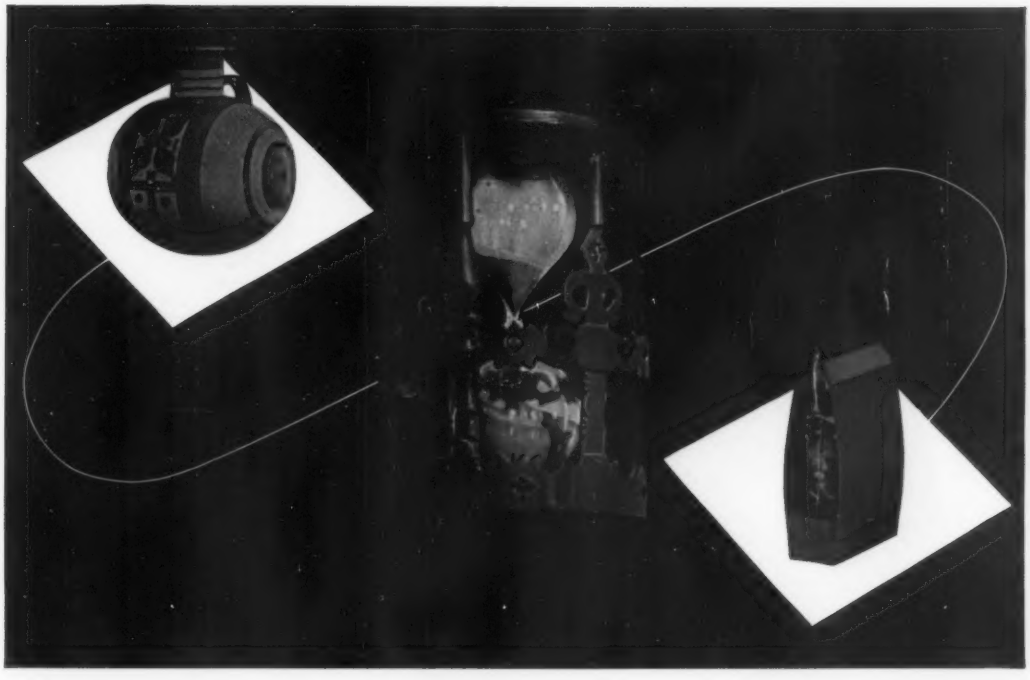

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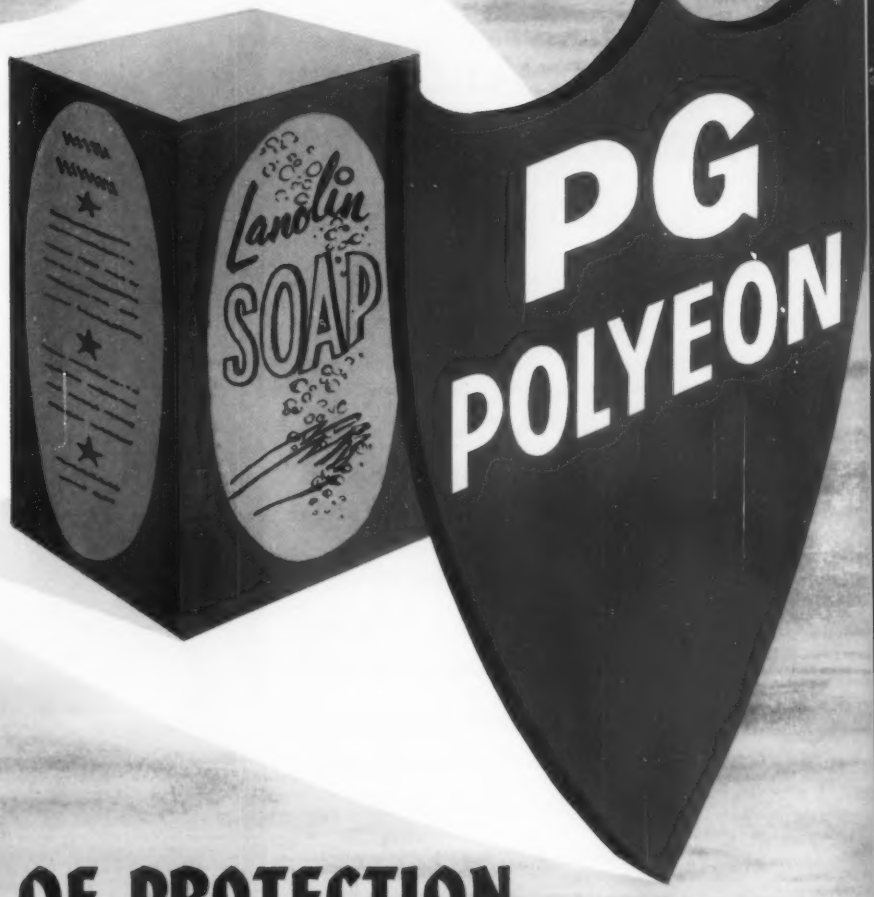

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Brown & Williamson uses Riegel Foldcote for its Viceroy 2200 carton, printed 3-color gravure by Diamond National Corporation.

World Report

Abstracts from foreign packaging magazines

WEST GERMANY

Freeze drying for perishables

A technique for preserving foods by a method of freeze drying, similar to that used during World War II to preserve blood plasma, is described in *German American Trade News* (New York). The method, which reportedly does not impair shape, color, aroma or taste of foods, is suggested as a promising development for the future growth of U.S. food exports to Germany, particularly of chickens and juices.

According to the article, the technique provides for foods to be frozen at minus 40 deg. F. and placing them thereafter in a vacuum chamber where the frozen moisture content is removed—bypassing the liquid stage—directly into vapor. The vapor, in turn, is removed by freezing it to coils. The food is then dried by heating it to temperatures between 0 and minus 15 deg. F. Finally, the food is sealed or canned to keep out moisture, but no refrigeration is required.

To prepare foods by this method, the consumer merely applies moisture. Within seconds, it is stated, the food absorbs water equal to the amount originally removed. By this process, the foods reportedly retain the freshness one would expect if they had never been stored.

U. S. and European food processors already have negotiations under way for installation of freeze-drying units. So far, the process has been applied only to small pieces of meat and vegetables used in soup powders. Total daily output of units in operation amounts to about eight tons. All have been supplied by a German manufacturer, thus far reported to be the only producer of freeze dryers on a commercial basis. Six models are available, but a 50-ton-per-day model now being developed is expected to make the technique economical for processing steaks, chickens, fruits, juices and other items. Freeze drying requires no refrigeration after the initial processing and it reduces shipping weight, thereby cutting transportation costs.

INDIA

Problems that face the drug manufacturer

Packagers may be just a little more appreciative of packaging quality standards taken for granted in Western countries when contrasted with packaging problems facing drug manufacturers in India as related by G. K. Dixit in *The Eastern Pharmacist* (New Delhi).

Mr. Dixit describes the difficulties of achieving efficient package protection for the preservation of drug products in a country where development of packaging materials and containers is still in its infancy and where packagers must cope with the extremely high temperature and humidity conditions of the Indian climate, undeveloped transportation systems and unusual hazards of rough handling.

The obstacles can best be understood, he says, by analysis of the position of the container manufacturer. Most of the bottles in India, apparently, are made either by semi-automatic or by manual blowing. Chipping and flaking of glass is prevalent due to lack of standards in glass composition, necessitating time-consuming and costly methods of inspection. Supplies are rarely of uniform dimensions. Uneven necks, variances in wall thickness and height, prevalence of air bubbles and other defects make it practically impossible to introduce any automation on filling and capping lines. It is, however, heartening, he says, to note that automatic machinery is being introduced for glass-container manufacture and the availability of better-quality bottles should not be too far in the future.

Although plastic molders use imported molding compounds, semi-automatic methods of production do not assure containers or closures of uniform dimensions. Lack of coordination between a large number of small manufacturers of glass containers and caps results in ill-fitting closures that cause an extremely high percentage of leakers and loose fits. Getting necessary airtight seals is very difficult.

Problems of contamination sometimes arise because of poor-quality tin, which is imported, for collapsible tubes to package ointments. Tube manufacturers in India, according to Mr. Dixit, are not always aware of the cleanliness required and very often tubes are found with dirt and even metal chips inside, which are very dangerous.

Due to unavailability of butyl rubber or silicone materials, natural rubber has to be used for closures. These present problems of moisture absorption. Rubber linings in caps are often uneven and tend to harden, causing untold difficulties. Efforts are being made to improve quality and it is hoped that plugs and liners will eventually be available to satisfy requirements.

Printing processes are fairly well developed in India, according to Mr. Dixit, but printers are not always in a position to do a good job because of the poor quality of paper and paperboard. Fading of ink on long storage, smudging and discoloration are common complaints. Locally produced board loses it strength. These difficulties can be solved only by improving paper and board manufacture.

The Government's role in helping to improve packaging standards in India cannot be minimized, Mr. Dixit feels. All encouragement and help should be given to indigenous manufacturers to produce goods of standard quality, he believes. The importation of machinery for this purpose should be allowed and he hopes that Government plans to help the packaging industry will materialize soon.

GHANA

Plant for aluminum production

The first plant for the production of aluminum in Ghana has been put into operation at Tema. The plant which, according to *Emballages* (France), has annual capacity for the production of 6,000 tons, will use at first imported ingots. The Government of Ghana holds 40% of the capital; the rest is the property of a Canadian group.

ENGLAND

Model kit to test machine plans in miniature

Constructional kits from which any type of packaging machinery can be built in miniature for testing are being marketed by a London firm, according to *Packaging News* (England). The range of components available are said to enable every possible machine motion to be reproduced by these models. Although the main purpose of the kits is to provide an inexpensive means of building experimental equipment or assembling trial layouts, the contents can be used also for constructing small machines that are needed for temporary work. As soon as a model becomes redundant, it may be stripped down and the parts re-assembled in the case ready for further use.

The kits are offered in two sizes, the larger one containing nearly 5,000 parts. The sets are supplied in a wooden case with a manual, but loose parts are also available. Machine units include power-transmitting equipment, such as gears, shafts and bearings. Among the components are small threaded parts, bushes, sleeves, rings, eye bolts, studs,

threaded rods and collars. Rigid frames of any size may be formed with the beams, cylindrical rods and clamps supplied. The working components for the desired machine are then built up at any point on this frame.

AUSTRIA

Polypropylene plant near Vienna

Ground has been broken in a suburb of Vienna for the building of a plant to produce polypropylene, according to a news brief in *Emballages* (France). The plant is the property of Danubia Petrochimie A.G., in which Montecatini reportedly has an important interest. Date for completion has been set for September, 1960.

SWITZERLAND

New machine for flexible vacuum packs

A Swiss manufacturer has produced an automatic machine capable of sealing 40 half-pound cheese pouches or 30 half-pound bacon pouches per minute. The machine, described in *Packaging* (England), uses two impulse-sealing elements above and below the seal. Both elements are on moving arms which come together and apply the pressure required for an effective seal. Pressure, temperature, sealing time and cooling time are all pre-set on dials which give a positive and exact control of the entire sealing operation. Once set correctly, the control panel is closed and the operator need only use a start-stop button. The sealing system is suitable for all thermoplastic films and, reportedly, is particularly effective on nylon films. The vacuum pump for the unit gives a displacement of 110 c.f.m., allowing a complete vacuum-sealing cycle of 6 sec.—providing 10 complete operations per minute. Vacuum pressure is pre-set on a dial. The machine may also be used for gas packing.

ENGLAND

New dried foods in rigid plastic

Mixed vegetables and sliced onions dehydrated by a hot-air process are the first of new-type food products introduced in England in molded transparent polystyrene containers with white polyethylene lids. Each contains the equivalent of 1½ lbs. of raw vegetables. Machinery is being installed for filling, labeling and lidding. The two initial products, according to *Packaging News* (England), will be supplemented later in the year by a series of complete-meal packs, also dehydrated. These will include minced beef with mashed potato, beef curry with rice, spaghetti with sauce and grated cheese. They are to be packaged in foil pouches inside folding cartons. Special store display units to hold 144 packs—24 cartons to show in each of six rows of four cartons—are designed to promote the new line.

SWEDEN

New design for unit-packaging machine

A machine for the unit packaging of granules, liquids and powders, constructed in Sweden, reportedly overcomes the intermittent movements to be avoided in high-speed equipment, according to *Packaging* (England). Sealing is effected by two sets of nearly square heater blocks which rotate in opposite directions, each time clamping the two webs between the nip of the bevelled edges and then quickly releasing them after the seal is laid. This assures a very smooth movement without any mechanical problems, it is stated, and thus provides a high standard of reliability. The machine is supplied either with equipment for measuring and filling powders or with a metering pump for liquids. Nearly all thermoplastic materials or thermoplastic-coated materials may be handled. The material is taken from two reels mounted on shafts on each side of the hollow core which serves as a filling pipe and at the same time as a former to shape the packet. Both the longitudinal and transverse seals are made by rotating sealing jaws whose temperature is accurately maintained by means of two temperature controllers with dial indicators. Filling is naturally synchronized with the sealing operation. Packages are separated from the web by means of a cutting device which may be pre-set for any desired length. Sizes may range from 1$\frac{3}{16}$ to 5$\frac{5}{16}$ in. wide and from 1$\frac{9}{16}$ to 17$\frac{5}{16}$ in. long. Production rate, depending on the size of package, is reported to be from 2,500 to 5,000 per hour.

FRANCE

Simplified methods for testing gas transmission

The lead technical article in the January-February issue of *Emballages* (France) deals with methods for the testing and control of gas transmission on thermosealed bags and pouches. The article gives detailed descriptions of procedures and apparatus used, along with illustrations and diagrams of the apparatus.

WEST GERMANY

Paper still leads packaging materials

Despite surprising advance of new packages and packaging materials, the fears that paper and paperboard would be put to a disadvantage in Germany have not come true, according to *Die Neue Verpackung* (West Germany). Latest statistics (1958) for Federal Germany show that about 50% of total package sales were of paper and paperboard. Though the growth rate was not quite so high as for plastics, says *Verpackung*, paper has certain advantages for distribution of goods, self service, fractional pack and other purposes. "Instead of expected competition between paper and plastics, in many cases a 'matrimonial alliance' has taken place," the article stated, indicating a trend to many combinations of the two materials.

Standard procedures for testing the water-repellent properties of solid fibreboard are being proposed in Germany, based on the TAPPI Routine Control Method RC-212. Heretofore, according to *Verpackung*, there has been no generally recognized procedure in Germany.

The March issue of *Verpackung* also contains an eight-page technical article on new uses for glass filaments bonded to papers, films and fabrics, pointing out applications for heavy-duty shipping sacks and wrappings.

NORWAY

Wrapping paper to prevent accidents

Pharmacies in Oslo are using a wrapping paper which warns parents to prevent accidents by keeping drugs out of children's reach. The paper is very attractive, says *Emballages* (France)—white with diagonally printed blue stripes. Between the stripes, caduceus symbols alternate with such printed recommendations as: "Keep children away from medicine cabinets," "Medicines for internal use are identified with white labels; medicines for external use, with red labels," "Store medicines out of children's reach."

WEST GERMANY

Combination of paper and foamed plastics

A type of paper filled with foam plastic is described in *Die Neue Verpackung* (Germany). The new material, it is stated, can be manufactured on any conventional papermaking machine. The amount of plastic incorporated in the pulp may be up to 50%. The material has possibilities for heat insulation and soundproofing. No actual applications for packaging were reported.

For additional information, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

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BERNARDIN BOTTLE CAP COMPANY, INC.
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PHOTOGRAPHY BY DICK BOYER

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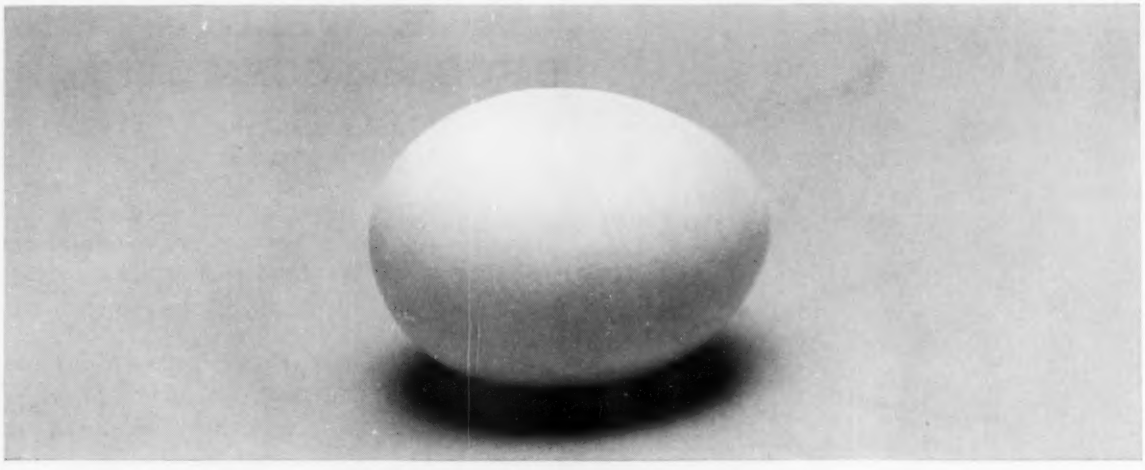
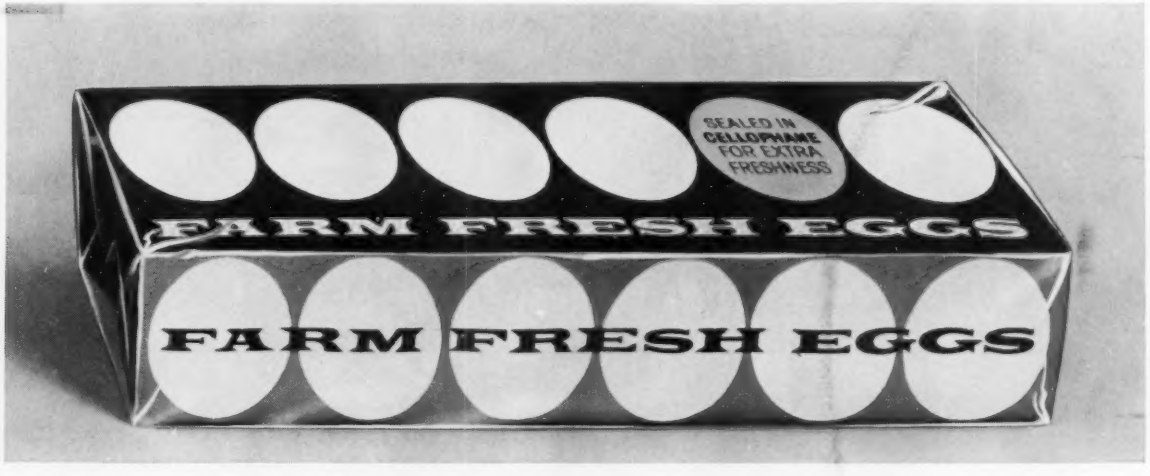


Even nature's most perfect package



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Editorial Memo

Show case

As these lines are written, with the final figures not yet in, it seems apparent that the 29th AMA National Packaging Exposition continued in the tradition of its 28 predecessors by smashing records here and there. An indicated attendance by some 28,000 visitors would represent a new high for Atlantic City. More exhibit space was occupied than ever before in a packaging show held in the East.

But these are monotonous occurrences. In all of the 29 years that we have been reporting this Packaging Show, there has not been a year in which some record failed to fall. This is a tribute not so much to the show management—which has been excellent—as to the steady growth of packaging activity, which since 1939 has risen five times as fast as our burgeoning population.

It's time we looked at the show in a new perspective. Figures and dimensions will continue to grow. More important is the quality of the performance. And in the matter of quality, nothing in this series of shows has, in our opinion, matched the 1960 exposition.

We write this from Atlantic City, where we have talked with hundreds of visitors touring the show with an eager and curious eye. "What's new?" is the standard question. Many are hard put to find a specific answer. The important developments that are ready for public display have generally been shown in this magazine previously; others are talked about only in secret.

But, almost without exception, a visit to the show has been an exhilarating experience. And we think we know why.

Never has so much solid information on the subject of packaging been so expertly presented in show form.

Visitors were impressed not so much with the size, the color and the elaborateness of displays—in all of which this show reached a new peak—as with the ease of communication and the intelligence of personnel manning the booths. Questions that could stump the experts were few and far between. Exhibitors seem to be concentrating not merely on attracting visitors, but on *telling* them something through technically qualified packaging personnel.

All of which suggests to us that the Packaging Show has reached a new status. It is no longer a circus or a side show. It is no place for the pitchman. It has become a sort of once-a-year seminar in which objects of interest can be seen, handled and compared, with the benefit of person-to-person conversation.

As champions of the printed word, we have always pleaded the supplementary value of the show. We are glad to see that the AMA event is reaching this stage of maturity.

The Editors

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PAKAY'S BIRTHDAY FIRE ENGINE MATCHED SET

May 1960 Vol. 33 No. 9 MODERN PACKAGING

DRAWING FROM ARCHITECTURAL DESIGN BY KELLY & GRUZEN FOR GRAND UNION CO.

The supermarket: what's happening?

The noble experiment that started the scrambling of all retail merchandising appears to be coming up for an agonizing re-appraisal that could pose the biggest challenge yet to packaging

Now that the concept of the supermarket—in a period of less than 30 years—has turned the whole world of traditional merchandising topsy-turvy, the supermarket itself appears to be coming up for some close scrutiny by the best marketing brains of the land.

And since the package is the strongest single factor in the successful development of self-service selling, it's time to take a close look at what's happening in the supermarket to see what the coming decade may do to packaging.

Economic, technological and social forces are at work with such strength as to challenge the imagination of every marketer of packaged goods, with all the help that he can get from package suppliers, equipment manufacturers and designers. Soundings from every quarter indicate that an agonizing re-appraisal is at hand.

• Very significant is the Super Market Institute's disclosure that, despite highest food-store sales on record ($53.7 billion last year), more than half (52%) of the new supermarkets opened during 1959 were doing less business than anticipated. There were several reasons for this, but the one most frequently mentioned was "competition" (1) from other supermarkets in the same trading areas, (2) from discount houses and variety chains turning into general stores selling everything including foods and (3) even from a new kind of merchandising of foods by telephone and mail order.

• Another danger sign is what *Super Market Merchandising* calls "hardening of the policies"—a tendency toward rigidity of company attitudes. An industry still so young, warns that publication, should not be meeting competition only on a price basis that is dragging every operation down to a common denominator, but should be merchandising with knowledge instead of hysteria and be ready to move with every sudden twist and turn.

• Behind closed doors, leading industrial designers and architectural firms are working on plans to improve store architecture, store layouts,

THE AUTOMATED STORE IS HERE

IBM systems like the one in operation 17 months at Throckmorton's Hardware Store, Dayton, Ohio, could revolutionize the whole concept of package design, display and constructions, shelf facings, store layout and fixtures. Reportedly, operation is as efficient for groceries as hardware.

14,000 items *are displayed by sample along 3-ft. wide aisles where there are no pushcarts, no multiple facings and no pilferage because there is no stock to pilfer.*

Shopper selects cards *with same numbers as items of her choice and takes collection of cards to cashier.*

Cashier puts cards through machine *that calculates total purchase and produces duplicates of order for bookkeeping records and for transfer to stockroom where orders are assembled and sent to pick-up windows. Shoppers leave store with fresh-from-stock packaged goods in only minutes.*

fixtures and packaging to increase operating efficiency and build up the store image.

- The makers of business machines and equipment are ready with developments in automation to eliminate the bottlenecks of inventory handling and check-out. IBM has already installed an automated store in Dayton, Ohio, that could revolutionize the whole concept of package construction, design and display, shelf facings, store layout and fixtures—even push the familiar pushcart into limbo.
- The palliative of private- and distributor-brand packaging looms on the scene once again as a means to obtain better profit margins, to meet or better prices of rivals, or to project a better store image.
- And on top of all this is the appearance of an increasing number of research studies to get consumer impressions of supermarket shopping, brought about by changing economic status and culture of the average American. The prominent

place accorded to a panel discussion by consumers on this subject conducted by *McCall's* Magazine at the May convention of the Super Market Institute is another significant sign.

So far, there seems to be no crystallization of thinking for the future plan of attack, but there are straws in the wind which may help packagers to turn their planning in the right direction.

Let's examine a few of them and consider how these factors may affect the package.

Creative merchandising

The majority of new supermarkets (90%) are in direct competition with between one and 10 others in the same trading area, according to the Super Market Institute. And despite the population explosion, the area population per store (both new supers and their competition) averages 7,300. In 1958, it was 9,300 persons per supermarket.

If such competition continues, then it follows that the showdown will call for something more than the weapon of cut prices or trading stamps. Obviously, it calls for creative merchandising—a concept which the supermarket heretofore has never had to face squarely. Supermarkets, in a manner of speaking, have been vast warehouses, where price-marked, packaged goods have been stacked on shelves more or less with the attitude, "Here it is, come and get it." True, the "warehouses" have become more and more glamorous—thanks to impressive architecture and to the carnival of colorful packages which manufacturers have designed to win attention in the battle of the brands.

Frantically, building on the theory of one-stop shopping, the supermarkets have added more and more lines of non-food items to bolster the profit picture. Now comes the thought that maybe they have gone off in too many directions at once—that perhaps it would be better to concentrate on what they started out with—namely, groceries—before they lose their leadership in food selling to the newer forms of retailing.

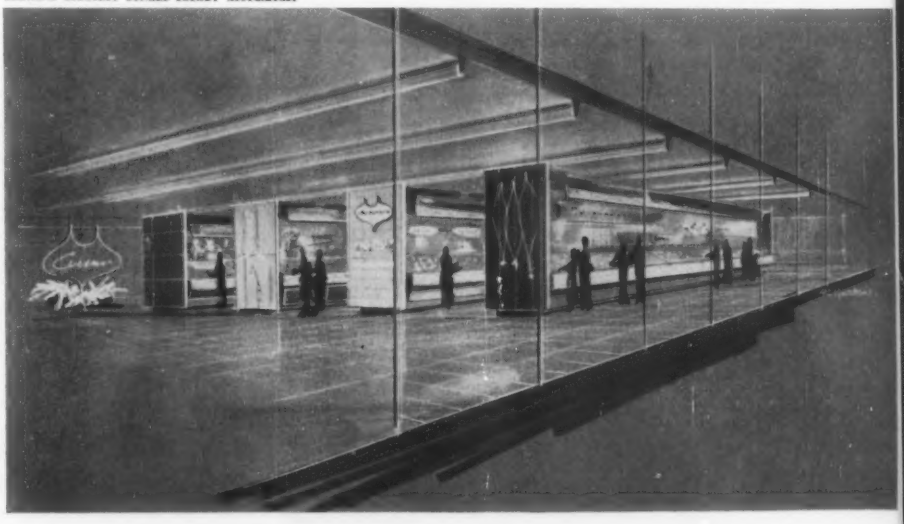
By and large, the supermarket has never had to meet competition with anything but price. It has had little experience in originating its own promotions, winning shopper loyalty through trading up certain departments, featuring dramatic displays of related items other than those offered by manufacturers, or using other merchandising strategies that department stores have been aware of for years. What supermarket, for instance, can boast of a store personality established by such advertising themes as "It's smart to be thrifty," or "Nobody, but nobody, undersells Gimbels?" Perhaps this will come up in the next round. And when it does, the package more and more will be called upon to take its place in these promotions with new concepts in surface design, constructions and point-of-purchase display aids that tie in with new store policies.

The Loewy studies

What gives a store personality? Super Market Institute has commissioned the industrial design firm of Raymond Loewy Associates to make a series of studies, one objective of which appears to be to find the answer to this question.

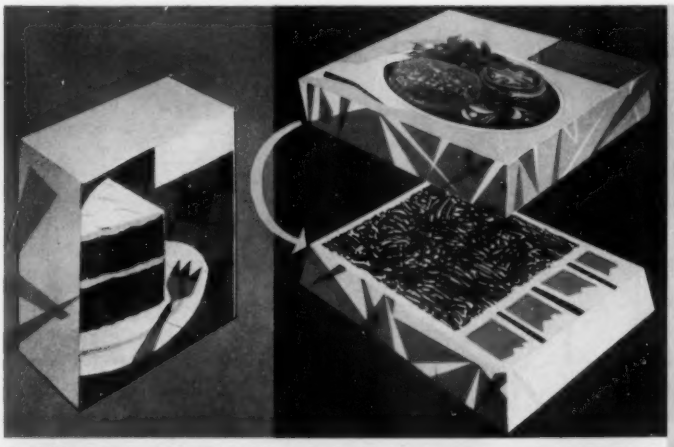
Initial findings of this 13-month study seem to indicate that when shoppers prefer one supermarket

DRAWING COURTESY DONALD DESKEY ASSOCIATES.

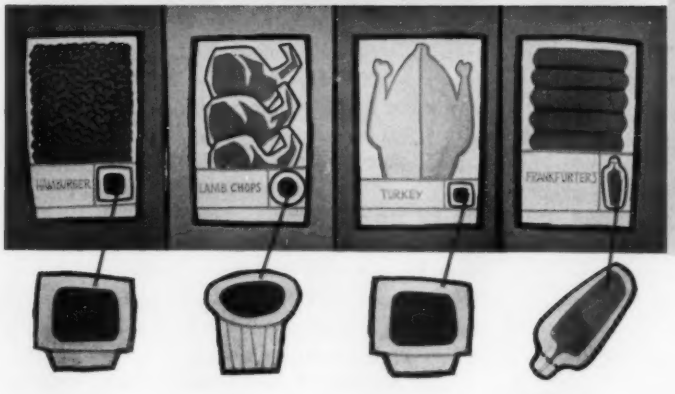


Ceiling-to-floor cases *for frozen and other foods are proposed by Designer Donald Deskey to make use of now-wasted vertical space above and below the few feet within easy reach of supermarket shoppers. Gravity-fed cases would be loaded from floor above. Such units could have significant effect on package design. Stock rotation would minimize multiple facings to make more room for increasing variety of packaged products and cut costs per square foot. Customers would have complete aisle freedom, without interference of loading, stacking and price marking.*

A DESIGNER'S IDEAS FOR TRADING UP MEATS



Put full-color illustrations *on meat packages, similar to those on cake mixes, to eliminate present monotonous rows of red muscle and bone, proposes Walter Stern of Raymond Loewy Associates. Use low-cost transparent plastic trays so that the shopper can turn them over to examine contents . . .*



Package related items *with meat, say ketchup with hamburger, mint jelly with lamb chops, cranberry sauce with turkey and mustard with frankfurters.*

to another it usually is because "it has such a good meat department," or "it has the best fresh fruits and vegetables," or "the best baked goods."

The logical deduction from this then would be that the supermarket should put forth its best effort to build customer loyalty by developing departments for which it can win unusual customer loyalty. By doing so, it would attract more shoppers not only to buy the store's specialty, but once there, to purchase standard packaged goods which otherwise might be purchased elsewhere.

How could packaging help to trade up such departments? Here are some suggestions for a meat department, proposed by Walter Stern of Loewy's package design division.

- Eliminate the monotonous sameness of today's unappetizing tray rows of red pieces of muscle and bone, decorated only with uninspiring price tickets that don't even hint at the sizzle of a steak. Imagine what the sales record would be, he says, if you just poured whipped potatoes in a tray, wrapped it in cellophane and merely attached a price sticker!
- Take a cue from the full-color illustrative techniques used in other packaging. Show pictures of delicious servings of meat with luscious gravy, mashed potatoes and a tossed green salad. Use new, low-cost, transparent plastic trays as the package so that the shopper can turn it over to examine contents for cut and quality.
- Offer greater flexibility in package sizes, more packages for individual servings so the shopper can pick up the number she wants without waste.
- Package meats along with portion-control packages—ketchup with hamburger, mustard with frankfurters, mint jelly with lamb, tartar sauce with sea foods, cranberry sauce with turkey.
- Eliminate the guesswork in meat buying by distinguishing between different cuts on the package with some such unmistakable quality designation as "good, better, best."
- Use brand names on meat packages as a way to establish quality acceptance.

The same designer also has some suggestions for improving produce packaging:

- Use skin packaging for tomatoes, choice onions, pears, plums and peaches so that the product is visible from all angles to eliminate customer distrust of what she doesn't see.
- Use some of the new bags made of polyethylene netting instead of polyethylene film for packaging apples to give a farm-fresh appearance to the fruit rather than showing it under a film.
- Replace weight pricing of produce with prepackaged, averaged-out piece pricing so far as possible—to get rid of the bottleneck of clerk pricing and bagging operations at the produce counter.
- Strive for an objective once stated by Paul Cupp of American Stores: "Our customers should be able to buy any package of fresh produce with as much confidence as they buy the finest canned brands."

Need for operating efficiency

While much of this thinking is directed principally to promotional aspects affecting the store's own packaging, other planning delves into manufacturers' packaging to make shopping easier and to cut the retailer's mounting operating costs by saving time, space and labor.

An outstanding example is Sylvania's new color-coded system of packaging electric-light bulbs, simplifying customer selection of the most frequently purchased wattages by identifying colors for the packages and saving hours of the store's time in warehousing and stock arrangement on the store shelf by color coding shipping cases. Undoubtedly, similar systems will be adopted in other lines.

But, such improvements are based on existing supermarket selling concepts. The space problem to accommodate the constantly increasing variety of items and brands in the average supermarket (around 8,000 today in contrast to 4,000 a decade ago) will demand other procedures.

The multiple facing of packages may be doomed, says Designer Donald Deskey. If this happens, packagers may have to revise completely their ideas of surface design and display. High cost of shelf space per square foot, the constantly growing number of brands and variety of products, the necessity of speeding up selection by the shopper and simplification of traffic patterns may force this.

Nearly 16 years ago, Mr. Deskey supplied information for a MODERN PACKAGING article envisioning automated principles in retailing.[1]

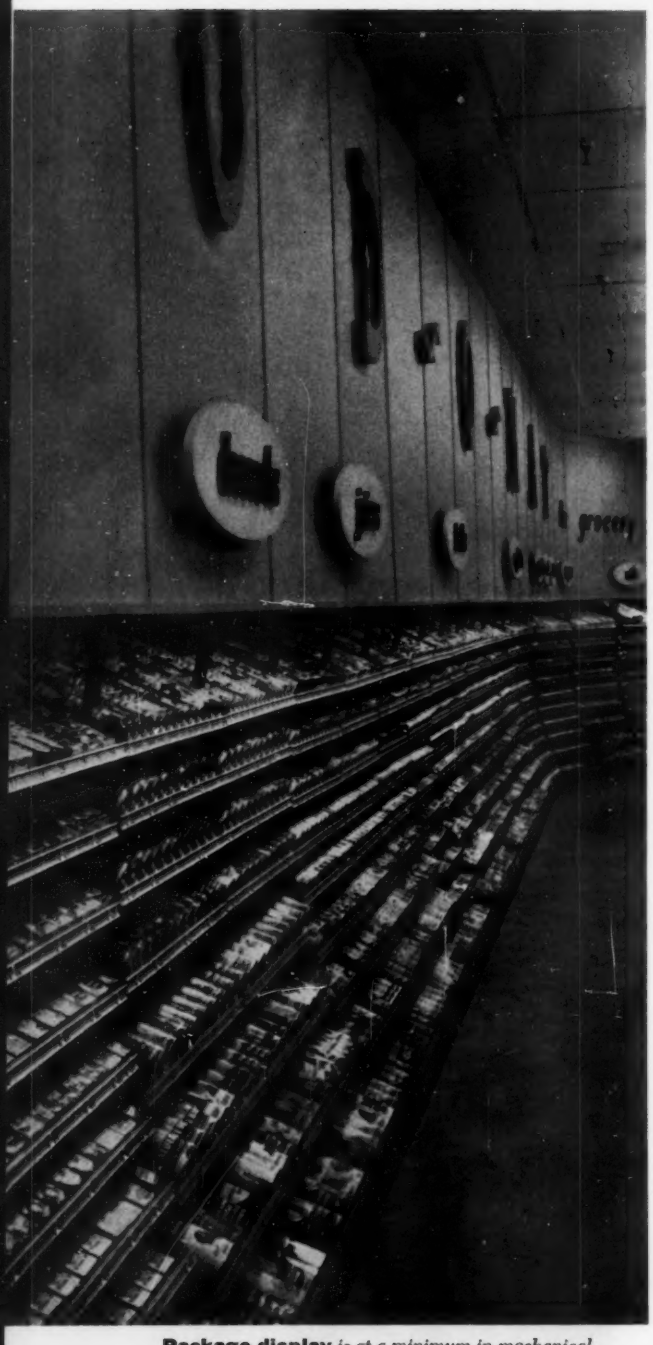
What was suggested then still stands today, he says, except that retailers may be nearer to realization of the need for such revolutionary innovations. Multiple facings today are predicated on the amount of stock required for peak selling periods. Automatic replacement of stock from a remote source would do away with the need of multiple facings. Nationally advertised brands which are in well-designed packages may be less dependent on maximum facings for shelf impact and recognition than those products produced locally and are less well advertised. The tremendous advertising impact of a package designed for maximum consumer appeal will lift it competitively from shelf neighbors which may be lesser known and lesser promoted.

Economics of supermarket operation eventually may force the retail merchant to make maximum use of cubic space. The wasted vertical space that now exists above and below the few feet within easy reach of the customer presents the most logical opportunity. This space is considerable in stores with ceilings 12 to 15 ft. high.

Mr. Deskey anticipates rotary conveyor units equipped with shelves along the walls for soap cartons, cereals, canned goods and other packaged items. The shelves would automatically rotate so

[1]See "Retail Futurama from a Designer's Notebook," MODERN PACKAGING, Nov., 1944, p. 86.

Multipack vending units *for soft drinks may call for revamping carton surface to emphasize brand and product identity. Only ends of six-pack cartons are visible in this new Vendorlator machine Pepsi-Cola has developed.*



Package display *is at a minimum in mechanical fixtures. Growing acceptance of automated storekeeping is further evidenced by 1,350 Food-O-Mat installations in operation today. These gravity-powered, rear-loading and front-dispensing units are designed to cut the high cost of linear shelf space, reduce the number of facings and simplify handling and traffic problems.*

that an operator could reload the empties with stock stored in the basement. One facing for each packaged item would be enough.

Mr. Deskey suggests island displays for prepackaged produce that would automatically drop to the basement for reloading when weight of the bins is reduced by sales to a point where they look empty. Refilled, the bins would automatically be elevated back to the selling-floor level.

His plan for selling frozen foods calls for a large refrigeration unit, which the shopper simply walks by to make her selections. She pushes a button at the station where the item is displayed and her package is delivered through a chute. The fixture could be rear or basement loaded and critical temperature maintained, using storage space above the easy-reach level now wasted. Today's crowding in the case would be eliminated.

The automated store

Mechanical storekeeping is no longer exactly blue sky. National American Equipment Corp. reports 1,350 Food-O-Mat installations in operation. Further evidence of the trend to automatic handling is indicated by the gravity-feed fixtures Heinz has introduced for baby foods[2] and Pepsi-Cola's new automatic vendor for six-packs, reportedly suitable for after-hour supermarket sales.

In Dayton, Ohio, Thockmorton's Hardware Store has been in operation for 17 months with the IBM equipment mentioned earlier. And supposedly what is being done there would be as efficient for groceries as for hardware. The effect it could have on packaging and the present concept of the supermarket is stupendous.

Throckmorton stocks 14,000 items. On the sales floor, each is displayed with all descriptive information as to price, brand, size, style, color and an invoice number. The shopper merely selects a nearby card with the same number as the item of his choice and takes his collection of cards to a cashier, who puts them in a machine that calculates the total which the purchaser pays. During this transaction, duplicates of the order are made for the store's bookkeeping records and for transfer by chute to the stockroom, where the order is assembled and sent to one of the 10 pick-up windows ready for take-out.

Three-foot-wide aisles save valuable display space, yet provide plenty of room for shoppers who have no need for pushcarts. Saving through elimination of shoplifting alone is reportedly enough to pay yearly rental of the equipment. There can be no pilferage, because there is no stock to pilfer—only samples attached to the display fixtures. There is

[2]See "Roll In, Roll Out," MODERN PACKAGING, Oct., 1956, p. 110.

Fancy foods *are expected to continue making gains along with increasing shopper sophistication. Hormel's new line of "Famous Foods Around the World" is an example of this trend.*

no need for price spots or pre-pricing on the packages because price is given on the display and on the cards. The customer receives fresh, unhandled packages from stock. Displays are easy to keep neat and in order without shopwear.

Throckmorton estimates the operation reduces labor 25% and can offer service twice as fast as conventional "self service."

What would such an operation do to packaging in the supermarket? The system immediately eliminates the concept of multiple facings. Only one sample is necessary to tell the story. In the case of hardware, many products are demonstrated in display *without* packaging—requiring the package only for stock handling and for the customer to take home. This might change the whole concept of today's transparent packages—film bags, blister packs and skin packages—the chief objectives of which are to display contents without shopwear and to provide convenient, see-through selling units.

New techniques would be necessary for brand emphasis not only in the small space allotted for the display sample, but to assure continuous brand recognition on the package from factory to stockroom and to the home of the consumer.

The automated store poses all kinds of questions that packagers and store operators may have to answer in the not-too-distant future. The questions involve everything from purely physical aspects of stock handling and display to psychological factors of shopper reactions to this new and revolutionary merchandising concept.

Private brands

Contrary to belief in many quarters, private brands are not being overly favored at the expense of manufacturers' labels, says *Food Topics*. A. C. Neilsen, charting 39 basic food groups, has found that controlled and minor supplier's brands inched up only from 24.1% of the market to 25.6% in the six years, 1953-58. Advertised brands accounted for 75.1% of sales in 1953, while in 1958—with the whole market expanded 40.7%—advertised brands dipped only to 74.4%. Private-label share of the market rose 44.6%, but national brands rose 39.4%.

A big worry to packagers of national brands right now, however, is the attention that chains, voluntaries and co-ops are giving to improved private-label packaging—seemingly making deliberate efforts to catch up by imitating the very constructions and design techniques which the manufacturers of national brands have spent millions of dollars to develop so successfully.

Food Field Reporter pictures a Food Fair private-brand cake-mix package almost identical in design treatment to the successful, nationally advertised Duncan Hines packages. What can Procter & Gamble, proprietors of Duncan Hines and some of the country's other most [*Continued on page 220*]

Soft-goods packaging *suited to the supermarket operation becomes a major concern of apparel manufacturers. Reliance Mfg. Co. adopts new polyethylene-wrapped window boxes and a special display fixture to help supermarkets to handle and sell its Charter line of shirts and pants with the same ease as packaged foods. Packages contain all essential information. Die-cut opening in film on package front permits shopper to feel fabric. Designer, Raymond Spilman.*

Tested at the bar—*three final designs: new enamel-decorated bottle, a suggested new shape with paper label and old squat brown bottle. At Waldorf Men's Bar, Prof. Merrill H. Levitt, who conducted the research, gets opinion of Bartender Ray Pateracki. Redesign was based on thousands of interviews during four-year program.*

SCOTCH

In a bold departure from accepted practice in its field, Haig & Haig Five Star scotch whisky now appears on the shelves with no labeling whatever on the body of the bottle except the name and five-star emblem, which are fired on in white on the clear glass. Mandatory copy is fired on in black lettering on the back of the bottle. The only conventional treatment is a small identifying paper shoulder label.

Basically, the idea is not unique. Haig & Haig has used similar labeling for some years on its famous "Pinch" brand bottle. But therein lies one of the reasons why this step must be considered daring. Pinch is a world-renowned, premium-price brand, for which the distinctive shape of the bottle itself serves as a trademark almost as famous as that of Coca-Cola. In applying an obvious resemblance in labeling to a more-or-less conventional straight-sided bottle, Haig & Haig would be upgrading the standard-priced Five Star brand (which sells for $6.60 in New York). Would it at the same time be downgrading the Pinch brand bottle, which sells in New York outlets for $8.60?

Even more serious as a marketing consideration was this question: Unlike Pinch, the Five Star brand must stand up on the back bar and liquor-store shelf and assert itself in direct competition with at least 20 other brands of scotch selling for approximately the same price. Would the severely restrained labeling cause Five Star to be lost in the crowd?

The proprietors of Haig & Haig do not answer such questions hastily. This is the first major package change for Five Star in 75 years. The new bottle—which involves distinctive new functional design of the bottle as well as the radical change in labeling—is the result of a four-year market-research program which sent a university professor, as a consultant, into countless bars and liquor stores and homes to study dealer and consumer reactions. The research technique is a story in itself.

The results convinced the distillers that the Pinch and the Five Star brands would help rather than hurt each other by visual association and, as evidence of this, the bottles now appear side by side in advertising sponsored by Renfield Importers, Ltd., the United States distributors for Haig & Haig products, with the significant promotional slogan, "Quality runs in the family."

And as evidence of the sales effectiveness of the new package, Five Star sales are now reported to be running 15% ahead of sales a year ago.

Other features of the new package:

- Displaying the golden clarity of the product as it does, without impedance of a paper body label, the new Five Star bottle is encouraging retailers to push this brand and to include it in gift baskets for holiday seasons, bon-voyage parties and for other gift-giving occasions. It is considered to have a quality look beyond its price.
- A redesigned base that fits more readily into bar wells is increasing acceptance of the package in pouring establishments.
- Grooved sides to prevent slipping and a knurled plastic closure that facilitates breaking the seal and also doubles as a measuring jigger are improved convenience features that are helping to win wider bartender and consumer favor.
- The fired-on enamel labeling (applied by the bottle maker in England) obviates untidiness from smudged or torn paper labels.

For years, the importers had been reluctant to associate the old, squatty, dark Five Star bottle with the Pinch for fear it would detract from Pinch prestige. Introduced 50 years ago by the 333-year-old House of Haig, the three-sided "Pinch" is the first

WITHOUT A LABEL

Would popular-priced
Haig & Haig Five Star care to speak softly
while competitors
are billboarding their brands?
Here's how the importers
reached their decision

Two brothers—*premium-priced Pinch and popular-priced Five Star—are now proudly displayed together in all advertising and promotion with the slogan, "Quality runs in the family."*

bottle in the liquor industry to be registered as a trademark in the Principal Register of the U. S. Patent Office. To jeopardize its acceptance was unthinkable. Yet, with a growing market for popular-priced scotches, it was recognized that something should be done about Five Star.

The late Joseph H. Renfield, former chairman of the board of Renfield Importers, Ltd., provided the impetus for a research program, conducted by Reach McClinton & Co. and Prof. Merrill H. Levitt of Seton Hall University, South Orange, N. J., who served as an independent consultant. This study has provided a package that brings the Five Star brand to a new place of prominence.

Between September, 1955, and November, 1959, when the new Five Star bottle was finally launched, a series of 15 individual but connected surveys was made to uncover the positive suggestions for changes from a large segment of those who use, buy or select scotch whisky.

The first study was made by showing eight carefully selected scotch whiskies to consumers in their homes as well as in taverns (those who had either purchased scotch for themselves or others within the past six months), to retailers and bartenders in taverns, restaurants, hotels and other pouring outlets. The respondents were asked to rate these bottles on various aspects of design, appearance, clearness, darkness and height. Three with the best ratings were singled out for further consideration. Tests were made with three other bottles of different design to determine specifically what shape, clearness or color of bottle was preferred. Consumers were also asked to differentiate between varying degrees of lightness of scotch in relation to color. Finally, three designs—the old Haig & Haig Five Star, a radically new shape and the enamel-labeled bottle eventually adopted—were tested. Respondents were asked to select what they considered the best features of each of these.

Grooved sides *of new bottle are designed to prevent slipping. Knurled closure facilitates breaking seal, doubles as measuring jigger.*

The studies revealed that the old Five Star bottle had several physical characteristics which did not appeal. Respondents seemed to prefer clear bottles which show off the golden color of the liquid and to feel that light color is an indication of lightness of body—a conception which is not necessarily true, according to distillers, but is recognized as an important merchandising consideration.

To make sure of the conclusion that consumers associate lightness of color with lightness of body, the research included preference tests in which those interviewed were asked to taste scotches of various shades poured into several glasses and placed side by side. In almost every instance, the respondents said that the product which was lightest in color tasted the lightest in body, even though the distillers knew that this was not always the case.

Accordingly (since scotch whisky does not require a dark bottle for protection against light), the new Five Star bottles were made of clear glass with fired-on enamel labeling to reveal clarity of the product to best advantage.

Objections to bulkiness were overcome by designing a slimmer bottle with grooved sides—easier to handle, easier to display and taking up less shelf space. The base was redesigned to fit the bar wells. And a modern design was selected to overcome the criticism that the former Five Star package was old-fashioned and antiquated.

Since introduction of the new Five Star bottles, conclusions of the original studies have been verified with follow-up studies. Not only the opinions of those interviewed in the follow-ups, but steady sales growth since introduction of the new bottle corroborate the research findings.

SUPPLIES AND SERVICES: New Five-Star bottles by United Glass, Ltd., London.

Secure closure *of new bulk corrugated shipper, achieved with internally anchored strips of glass-fibre-reinforced acetate tape, is examined by industrial engineers at Dow Chemical Co. A latex adhesive is all that is required to fasten the outer carton shell to the wooden pallet.*

New 1,000-lb. shipper

Dow's corrugated container for polyethylene resin is closed and strengthened by six strips of reinforced filament tape and secured to its wooden pallet by adhesive alone

Six strips of pressure-sensitive tape and a few dabs of glue have so markedly improved a corrugated bulk container used for 1,000-lb. shipments of polystyrene resin that steel straps and metal corner plates, previously used to close the container and hold it on a wooden pallet, have been discarded.

The carton is now secured to the shipping pallet with adhesive alone. The reported advantages include greater resistance to shipping impact, increased ease of assembly and smoother handling in warehouse and shipping operations. The packager is The Dow Chemical Co., Midland, Mich., which uses the container for its "Styron" resin.

Minimum changes in design of the new shipper are said to enable it to compete favorably in price with the previous steel-reinforced cases. Cost of the glue, tape and small modifications in construction is offset by elimination of metal components.

Tests of both old and new cartons, made on an incline-impact tester, disclosed improvements in performance. Subjected to a "fourth-zone impact" (9 m.p.h.), the new carton held firm while the old one shifted on the pallet, breaking deck boards.

Construction of the tape-fastened container is simple. The outer shell is a tube with 6-in. bottom flaps that are tucked under and glued to the pallet with a latex adhesive. A shallow, pre-stitched tray is inserted inside this shell, followed by an inner liner, a tube of corrugated board with no flaps. The top cover is another shallow tray of corrugated, which fits over the shell and is secured by six strips of ¾-in. pressure-sensitive acetate tape, reinforced with glass fibres.

Tape is attached to the inner surface of the outer shell during set-up. It runs down from the top, out through six die-cut slits in the shell and is then fastened up and over the lid. The anchoring end of the tape is thus sandwiched between the shells and held under pressure when the package is filled. Cases, set up in the Dow plant, can be assembled at any point without special equipment.

Its strength, convenience and economy are thought to make this shipper of wide interest in the bulk handling of many dry products.

SUPPLIES AND SERVICES: Bulk cartons by International Paper, 220 E. 42 St., New York 17. "Permacel 162" tape by Permacel, New Brunswick, N. J. Adhesive by H. B. Fuller Co., 225 Eagle St., St. Paul 2, Minn.

Cake mix in a bag

Canadian producer makes a marketing hit with a paper-plastic pouch so economical that it enables him to sell a quality product at one-third less than his own cartoned brand

Economical *new paper-polyethylene pouch permits T. A. Steeves to sell 15-oz. Quick as a Wink cake mix at two thirds the price of cartoned line (left) while maintaining same quantity and quality. Sales of new product are said to be almost entirely new business.*

With the adoption of low-cost, automatic pouch packaging, a Canadian manufacturer of prepared cake mixes has opened up a whole new market without disturbing the sales of its established product in conventional cartons. The innovation takes its cue from successful Canadian pioneering of polyethylene-bag packaging of frozen foods.*

The new package is a simple two-ply paper-and-polyethylene film pouch. Formed, filled and sealed at 40 units per minute, it reportedly cuts packaging-material cost 67% and reduces labor cost by as much as 80% compared with carton packaging, permitting the company to sell a new cake-mix product for about two-thirds the price of its regular brand—with no decrease in quality or quantity.

This is a success story that may very well have repercussions in many big-volume product fields in the United States. Some of the largest U.S. producers of cartoned cake mixes are reported to be studying the Canadian innovation.

Major production economies aside, the use of an easy-to-open protective pouch package for a product historically packed in a carton indicates anew how creativity in basic package planning can bolster a sagging sales structure.

The packager is Thomas A. Steeves, Ltd., New Westminster, B.C. (11 employees, $450,000 gross). Its decision to supplement cartons with pouches was made last year and it was based on a surprising revelation. Pondering the paradox of an industry-wide decline in prepared cake-mix sales despite Canada's buoyant economy, president T. A. Steeves concluded that competition among cake-mix manu-

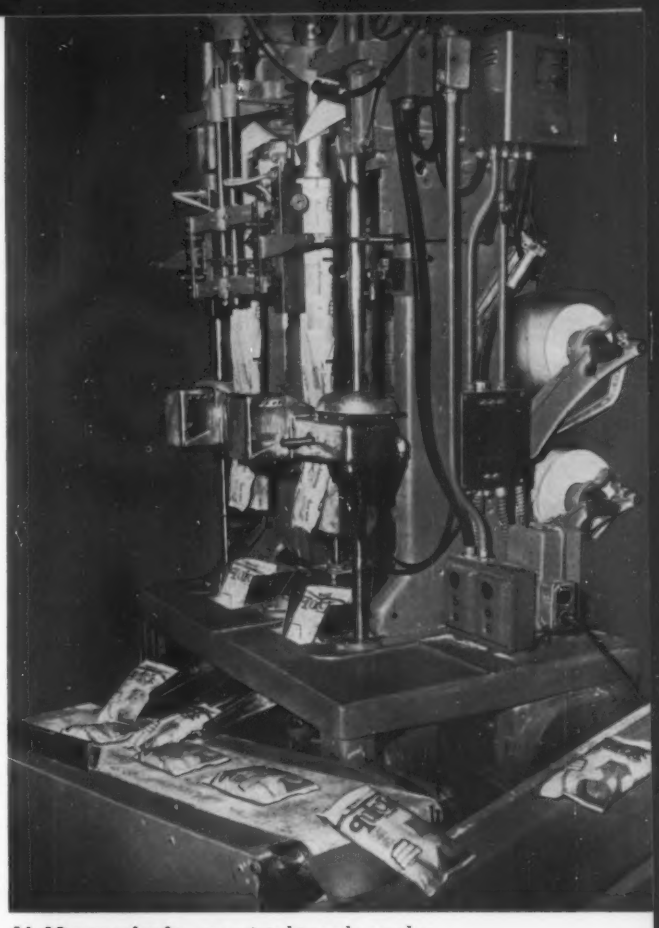
* See "Frozen Food in Bags," MODERN PACKAGING, Feb., 1959, p. 104.

facturers was largely responsible for the downward sales curve. He reasoned that packagers were actually driving consumers away from these products by offering a bewildering variety of cake-mix flavors in ever fancier and more costly cartons. What was needed, he believed, was a lower-priced product in a less costly package that would stand out in retail display among look-alike, priced-alike competitors.

Steeves made a basic decision to retain its 15-oz. carton of Little Dipper brand cake mix. Retailing at 29 cents a box and offered in 10 flavor varieties, the product had built a solid share of market which the packager did not intend to relinquish.

Out of this background, Steeves evolved a new product: Quick as a Wink cake mix in mechanically flattened, 15-oz. pouch packages measuring 5⅛ in. wide by 9½ in. high. It went on the market last fall with a 19-cent price tag and, according to the packager, registered an instant success. The company says it expects to sell some two million pounds of the product this year, almost all of it new business in addition to its established cartoned volume.

Impressive economies in packaging materials, production and marketing procedures enable Steeves to sell the new cake mix for one-third less than its carton-packaged companion. The two-ply pouch material—bleached, 25-lb. basis weight polyethylene-coated kraft and an inner liner of 1.75-mil polyethylene—is reported to cost only one-third as much per unit as a carton. Economical four-color rubber-plate art treatment, using none of the halftones or color-photography reproductions common to standard cake-mix cartons (including those for the Little Dipper brand), also helps keep costs down.



At 40 per minute, *pre-printed two-ply pouches come off automatic former-filler-sealer. Only one operator—a case packer—is needed to handle the machine's output, in comparison with three to four for the carton-packaged companion product.*

For stand-up display *of soft, unsupported pouches, Steeves supplies retailers with low-cost paperboard trays. Company keeps package-inventory costs down by offering the pouched cake mix only in three of the most popular varieties.*

On the pouch-packaging line, only one operator is needed; her job is to case pack the output of the company's automatic former-filler-sealer. By comparison, three to four operators are required on the carton-packaging line, which operates at about the same 40-per-minute speed.

Steeves holds the line on packaging costs for Quick as a Wink in other ways, too. Package inventory has been minimized by offering consumers a choice of only three cake-mix varieties instead of 10 as in the Little Dipper line. But the selection available (white, chocolate and yellow) accounts for some 65% of the total annual market for cake mixes, the packager points out.

Packed in minimum case lots of 24 rather than 12, the new mix is sold to retailers strictly through food brokers. Freight charges [*Continued on page 196*]

SUPPLIES AND SERVICES: Pouch material by Crown Zellerbach Canada, P.O. Box 2079, Vancouver 3, B.C. "Strokeswrap" Model BS form-fill-seal machine by FMC Packaging Machinery Div., Stokes & Smith Plant, 4942 Summerdale Ave., Philadelphia 24.

Clocks get supermarket appeal

Westclox makes a successful supermarket item of alarm clocks by adopting a versatile hang-or-stand blister pack that lets shoppers test the product without removing it from the package. The company (a division of General Time Corp.) reports a 50% sales increase since introducing a line of blister-packaged clocks into big-volume self-selection outlets on a test-market basis. Westclox's experience could be applied by other packagers whose products are purchased largely as the result of in-store decision.

The face of each clock is visible through a flanged 15-mil butyrate blister which is mounted on a functional fold-over hang card. The flared-bottom construction of the double-walled card gives it a stand-up base that enables dealers to display the package on counter or shelf, as well as from a wire rack. Die-cut openings in the rear wall of the card permit shoppers to start the clock and test the alarm.

The red, white and blue printed card features a prominent price mark, for added impulse appeal. *Card by St. Regis Paper, 150 E. 42 St., New York 17. Blister by Plastofilm, Inc., Wheaton, Ill., using Chicago Molded Products' butyrate. Design by Lippincott & Margulies, 430 Park Ave., New York.*

IDEAS

Convenience dessert comes in a 'cake-mix' carton

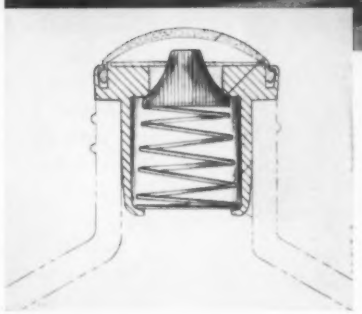
General Foods adds a "do-it-yourself" cream-puff or eclair mix to its impressive line-up of convenience foods. Under the company's Swans Down label, all three product components —shell, filling and topping—are separately packaged inside an easy-to-open, full-color-printed carton. The shell dough is in a transparent cellophane bag; the filling and topping ingredients are contained in foil-laminated envelopes. Each of the three interior packages is printed with detailed instructional data and each is numbered 1, 2 or 3, to indicate the sequence in which they are to be used.

Basic carton-design elements help differentiate this self-contained dessert mix from Swans Down cake mixes. Carton background color is pastel blue, in contrast with red for other products in the line, and the white-swan trademark appears in reduced size at the upper right of the front panel. *Design by Dixon & Parcels Associates, 485 Fifth Ave., New York 17. Carton by Diamond Gardner's U. S. Printing & Lithograph, 340 Beech St., Cincinnati 12. Foil-laminated envelopes by Dow's Dobeckmun Div., 3301 Monroe Ave., Cleveland 13. Bag by Bagcraft Corp. of America, 3900 W. 43 St., Chicago 32, and S. Posner Sons, Metropolitan & Scott Aves., Brooklyn.*

Flow-control glide dispenser

An improved controlled-flow applicator fitment—designed to eliminate waste, leakage and running of externally applied liquids and semi-viscous products—has been adopted by W. F. Young, Inc., for 2- and 4-oz. bottles of Absorbine Jr. liniment. The improvement over the earlier, capillary-action model of this convenient dispensing device (see "Glide-On Applicator," MODERN PACKAGING, Feb., 1957, p. 119) is a flow-control valve consisting of a stainless steel spring with a conical tip. Without the former need for priming, the valve permits immediate and controlled flow of the liquid product from a built-in reservoir through the applicator's porous, inert neoprene-foam top membrane.

Two versions of the applicator, both having the same dispensing action, are used for Absorbine Jr. On the 2-oz. bottle the mechanism is contained in a polyethylene plug which is friction-fit into the container's neck, as shown in the accompanying diagram. For the 4-oz. bottle the applicator is built into a screw-type polyethylene fitment that can be removed for pour dispensing. The larger fitment is externally threaded to accept a urea overcap. *Applicator fitment by Dab-O-Matic Corp., 15 W. 44 St., New York 36.*



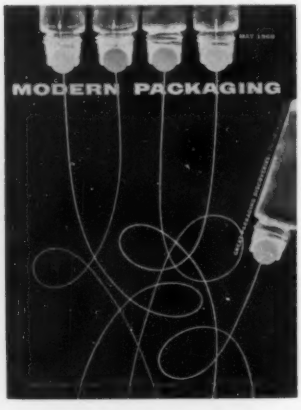
IN ACTION

Tear tape for a liquor bottle

Now the tear tape has been adapted by a liquor bottler to provide no-knife, no-damage breaking of closure seals. It is an application which once again demonstrates that, with a little imagination, good packaging ideas can be successfully transplanted from totally unrelated product fields. (See "Idea Exchange," MODERN PACKAGING, Dec., 1959, p. 95.)

The packager in this case is Star Hill Distilling Co., Loretto, Ky. It is using the tear tape for Maker's Mark bottled bourbon. After the bottle is filled and corked, a ¼-in.-wide strip of glass-reinforced pressure-sensitive filament tape is wound around the bottle's lip, slightly overlapping the cork. The bottle head is then dipped into molten thermoplastic wax which, when dry, provides a decorative, protective and tamperproof closure seal. When the tear strip is pulled off (a ¼-in. extension of the tape end permits easy finger-and-thumb grasping), it carries with it a portion of the wax, leaving a clean pouring surface. The packager also points out that the danger of chipping the bottle lip during seal removal is eliminated because no knife or other seal-breaking instrument is needed. *Filament tear tape by Minnesota Mining & Mfg., 900 Bush Ave., St. Paul 6.*

GREAT
PACKAGING
DISCOVERIES—14



THIS MONTH'S COVER

The roll-on applicator

How seven years of research produced a package which shot a new product to the top of its field—and offered a new convenience form to dozens of other products

Some *Great Packaging Discoveries* seem only as old as yesterday. With its revolutionary roll-on package for Ban lotion deodorant, Bristol-Myers only five years ago originated a principle of application that marked a significant milestone in convenience packaging.

Few packaging discoveries offer a more convincing demonstration of the power of package convenience to achieve success for a new product than this little glass container, equipped with a polystyrene marble that swivels in its polyethylene ring holder, picks up a film of liquid from inside and carries it to the outside for application by "rolling it on."

Within eight months after it was introduced in 1955, this package put Bristol-Myers into leadership in the intensely competitive deodorant and antiperspirant field. Ban continues to hold the largest share of this market.

The final tribute, perhaps, is the list of more than 50 roll-on competitors, now accounting for 38% of today's total $100 million deodorant sales, which just five years ago were divided between squeeze-bottle sprays, creams and sticks. "This imitation *is* the sincerest, if not the most welcome, form of flattery!" says Richard K. Van Nostrand, assistant vice president and new-products marketing supervisor at Bristol-Myers, under whose leadership Ban was originally launched.

And for the general packaging field, the significance of this packaging discovery is its rapid spread to completely unrelated products, such as roll-ons for the application of a poison-ivy remedy, garlic and barbecue seasonings, liquid lip rouge, artcraft paints and glues. And the letters Bristol-Myers gets from consumers telling how they re-use Ban roll-on containers for paints, pastes, cooking oils and other household products suggest untapped potentials still ahead.

The development took nearly seven years. In 1948 Bristol-Myers started active research in the lotion-deodorant field. The company wanted a liquid product which would be both a deodorant and antiperspirant, as a companion product to its Mum in cream form. After several months there evolved a product called Mum Lotion in a squeeze bottle. It looked promising and a sales test was built around the general theme, "Three pink drops and odor stops." But when the hot Texas sun got to working on the product, it thickened to a point where a hammer was needed to get the "Three pink drops." Subsequent research licked the problem of product flow, but the company felt that an improved method of application was needed. They wanted a package that eliminated messiness of creams and drippiness of sprays. The search continued while the product waited.

Early in 1951 the roll-on principle came under study at Bristol-Myers. The Package Development Dept. originally considered it for lip rouge, but the company decided not to go into this product field. It was suggested that the ball applicator be tried for deodorant lotion. Within months the engineering staff had developed a ring-and-marble construction and a product called "Mum Rollette" was rushed into six major markets. Again difficulties arose. Design problems were still apparent; the product had a tendency to dry out and freeze the marble. Says one company spokesman, "We had a wonderful lotion inside, but a marble that would not turn to apply it."

The problems of getting the marble to roll seemed simple enough, but it took package engineering another year to solve it. In the beginning it was not realized that the package would have to be a precision instrument that could be mass produced to tolerances of 0.003 in. Such statistical quality control is rare for consumer packages produced by the millions. The clearance between the marble and the ring had to be maintained regardless of temperature conditions and

reaction of active ingredients in the product itself. The company says 430 combinations of plastics were studied before packaging research came up with the solution: two compatible plastics formulations—polystyrene for the ball and polyethylene for the neck ring.

The marble was a cause for more gray hair. Every known manufacturer of ball bearings, marbles and other solid spherical objects was contacted. Most of them threw up their hands at the prospect of mass producing low-cost plastic marbles on a precision basis. A firm was finally located that licked the problem. Another prodigious task was the design of the cap that provides the tight seal. This was accomplished through the use of a top seal which is patented by Bristol-Myers and which is exclusive with them. The cap was originally made of transparent polystyrene to show off the roll-on construction. Today polystyrene has been replaced with a gold-sprayed phenolic cap. The company feels that since consumers have become familiar with the ball-applicator principle, the transparent plastic is no longer necessary. And impressive savings have been achieved by adopting the phenolic cap.

Bristol-Myers has recently installed a 300-per-minute packaging line to handle Ban and Trig, a companion deodorant lotion especially for men, packaged in the same kind of roll-on container. (See "Tilt-Fill to Cut Foaming," MODERN PACKAGING, Feb., 1960, p. 109.)

The discovery that took seven years has paid off handsomely—both for its discoverers and for other packagers who have benefited from it.

Tolerances *of 0.003 in. are maintained to assure proper functioning of marble-in-ring at all times —precision reportedly unusual to achieve for a mass-produced package.*

Flattering—if not welcome—*tribute are Ban's more than 50 known roll-on competitors, some of which are illustrated here. The Bristol-Myers Package Research Department tests them all every six months.*

Fragrance comes

Aroma of delicate perfume, lastingly blended into the film resin itself, enhances the sales success of Comette Mills' nylon hosiery by adding the dimension of 'scent appeal' to printed polyethylene bags

Packagers have, on occasion, probed beyond the conventional sensory appeals of *sight* and *touch* to excite new interest among jaded consumers. They have experimented with *hearing* (the "talking" carton) and even to a degree with *taste* (edible dip coatings). Now the sensory cycle becomes complete with the commercial introduction of a polyethylene bag that communicates to man's sense of *smell*.

There have been other attempts to add aroma to packages, but this is apparently the first time that the fragrance has been made an integral and long-lasting part of the material itself.

The new scented film bag, which gives off an aroma of delicate Chanel No. 5 type perfume, is being used by Comette Hosiery Mills, New Braunfels, Tex. (125 employees, $1,200,000 gross), to package nylon hosiery. It was originally adopted on a cautious test-market basis. But the appeal to feminine nostrils of the 2-mil package has proved so successful a sales stimulant that Comette reports plans to switch to bags with other scents for its entire soft-goods line (including handkerchiefs and men's socks) as soon as its present supply of unscented bag stocks is exhausted.

Significantly, the addition of perfume fragrance is the only departure from the packager's former bag for nylons. Both the surface design and the construction of the bag remain unchanged.

The bags are supplied to Comette in prefabricated form. They achieve their delicate fragrance via a patented resin-blending process that is reported to add very little to the cost of the finished package. First operation in this technique is blending aroma concentrate into a carrier polyethylene resin, to form highly scented pellets. The aromatized pellets, in a 0.5% formula, then are blended with film-grade resin for extrusion into film.

According to the packager's bag supplier, the perfume aroma thus becomes an integral property of the film. Tests have been conducted to prove out the long-lasting properties of the scent-impregnated material. Samples of the film which have been stored for longer than six months show no diminution of fragrance, says the supplier company.

Comette reports that the extra cost of its 0.5%-concentrate scented hosiery packaging comes to only $\frac{1}{50}$ of a cent per bag, which adds up to a relatively insignificant dollar total even when applied to large orders. In a preliminary run, the bags contained a 1% concentrate of scented polyethylene, but tests indicated that use of the lower percentage not only was more economical, but also proved to be entirely adequate for scenting purposes.

The slight additional cost involved, says the packager, becomes even less of a consideration when compared with the scented bag's merchandising appeal. Because of the permanence of the blended-in fragrance, Comette points out, many grooming-conscious women prefer to keep the bag for re-use as a sachet or garment-storage container rather than disposing of it. Thus, the brand message printed on the bag can do a sales-making job in the home long after the purchase has been made.

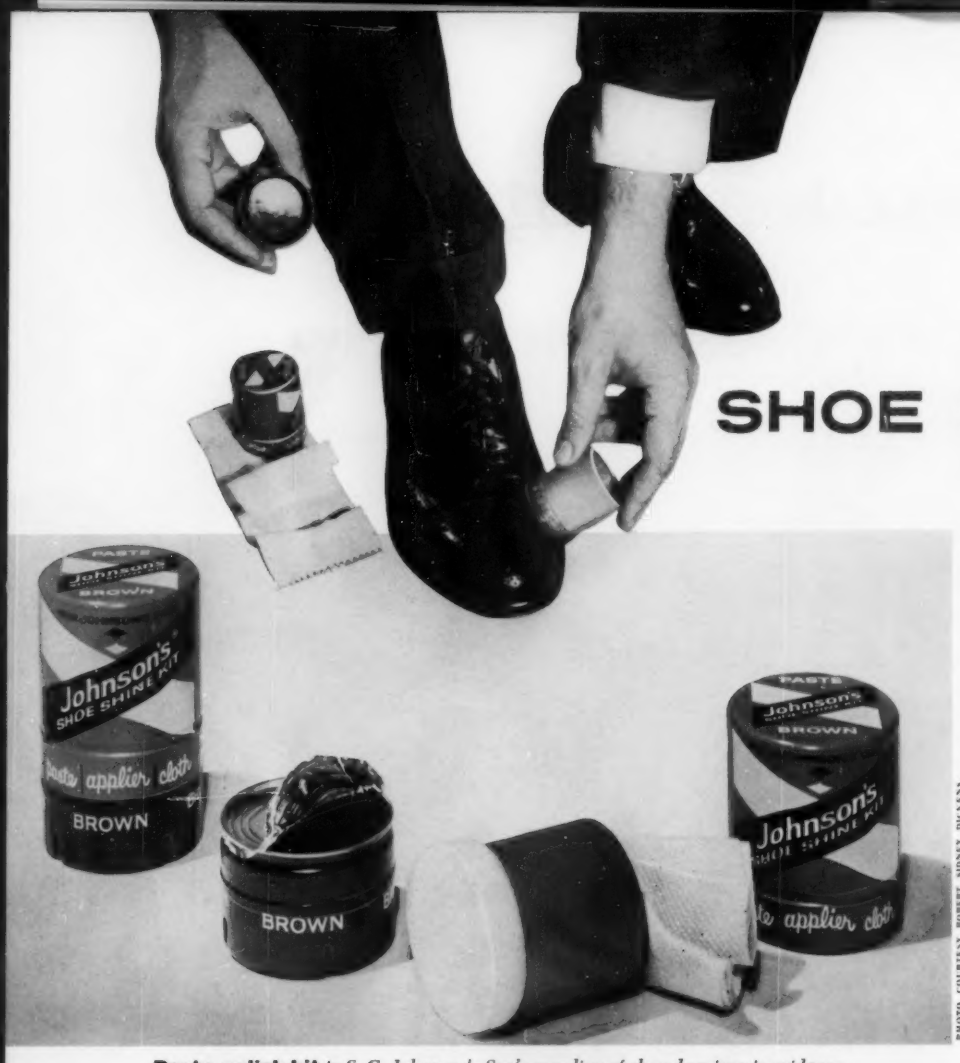
Comette's apparently successful experiment with integrally scented packaging conjures up a host of possibilities for other product fields. The developer of the polyethylene scent-impregnating process says that almost any fragrance (including food aromas) can be duplicated in film or molded packaging materials, using varying concentrates—up to 5%—of scented pellets. (One possibility which has been suggested is a scented closure to identify the product in the container.) If so, the day may come when customers can sniff their way around a store to track down elusive items on their shopping lists—just as they often did in the good old days.

SUPPLIES AND SERVICES: Film extruded and bags fabricated by Texas Plastics, Elsa, Tex., using U. S. Industrial Chemical's "Petrothene" polyethylene resin with "Poly-Scent" pellets by Fragrance Process Co., 667 Madison Ave., New York 21, and Allied Chemical's Polyethylene 6 carrier resin.

to packaging

Unimpaired printing quality *of scented film used for Comette Hosiery packages may be observed—along with the delicate fragrance. Face of bag is illustrated above. The back is transparent. Perfume is permanetly locked into the polyethylene resin before film is extruded. Added cost: 1/50 of a cent per bag.*

SHOE SHINES



Paste-polish kit *in S. C. Johnson & Son's new line of shoe dressings is evidence of design for easy application. Complete kit (shown partially open at left) holds all of these components in a pre-lithographed can 3⅝ in. deep—an unusually deep draw. Foil-covered base can contains polish. Metal shell has a urethane-foam applicator pad heat sealed to one end and a 3-by-15-in. polishing cloth inside.*

S. C. Johnson & Sons, the Racine Wis., wax manufacturer now well launched on an intensive product diversification program, has come up with two arresting new packages for its debut in the shoe-polish field. Both of the packages are outstandingly designed for convenience.

The first—for three liquid shoe dressings—is a blow-molded polyethylene bottle in a truncated-cone shape with a built-in applicator and an unusual transfer label. The second is a three-part tinplate can which houses a complete kit of paste polish, applicator and polishing cloth.

For both the paste polish and one type of liquid shoe dressing, the applicator utilizes polyurethane foam—a material which seems likely to find many similar uses in packaging.

Both containers represent noteworthy technical progress by the Johnson company (1,500 employees) and its suppliers:

1. The blow-molded, low-density polyethylene bottles are said to be the first tapered shapes to be successfully decorated by hot-transfer labeling. Round and oval bottles have been transfer labeled for some time,* but Johnson's conical shape required substantial modification in the labeling technique to guarantee smooth coverage and even printing of the three-color label prior to delivery to the packager. Johnson expects to install transfer-labeling equipment in its own plant shortly.

2. The 3⅜-in.-deep can is thought to have one of the highest depth-to-diameter ratios (almost two to one) of any pre-lithographed drawn can. Di-

*See "Transfer Labeling of Squeeze Bottles," MODERN PACKAGING, April, 1958, p. 106, and "Transfer Labeling in the Round," MODERN PACKAGING, May, 1959, p. 108.

For its entry into the shoe-care field, Johnson's Wax develops some outstanding convenience features, involving significant new treatment of both metal and plastic containers

MADE EASY

ameter is about 2 in. Development of the can took more than two years of study and experiment by the Johnson company and its supplier.

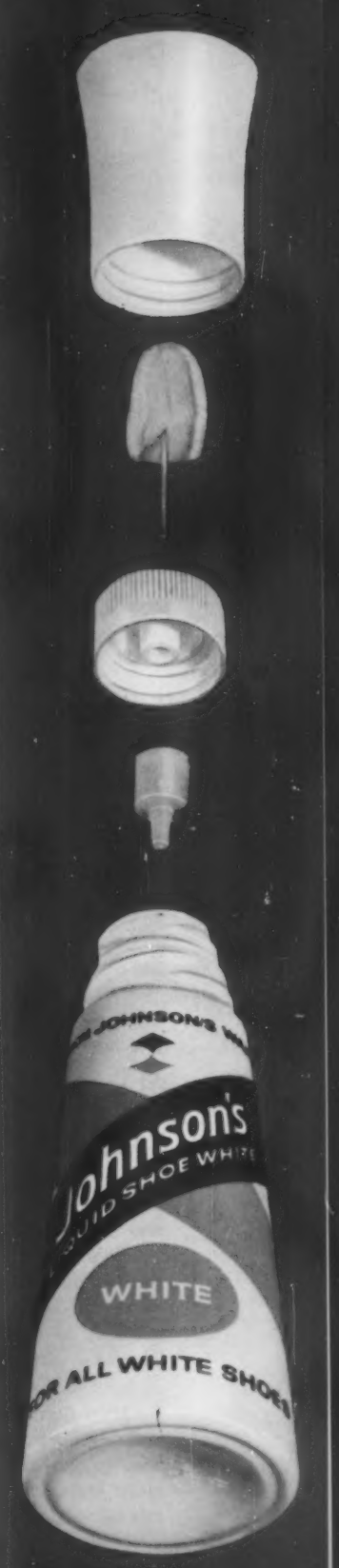
The bottle-labeling achievement is particularly significant, since the conical shape presents problems not unlike those encountered by detergent manufacturers who are swinging to special-shaped, high-density polyethylene bottles at a potential consumption of 400 million per year.

Johnson's liquid polish is of three types. Self-shining dye-type polish comes in five colors—black, brown, oxblood, tan and neutral. Scuff-covering pigment-type polish for children's shoes is offered in black, brown and red. There is also a white shoe polish for all white shoes. The paste kit is aimed primarily at men and comes in the same five colors as the self-shining liquid polish. Design of the packages makes these color distinctions clear.

The entire line has been introduced in Ohio. Marketing plans beyond Ohio have not been announced.

Plastic bottle for liquid

Johnson chose a conical shape for the liquid-polish bottle because it is distinctive, fits more easily in the hand than would a straight-sided bottle



Liquid-shoe-polish kit *consists of (bottom to top): heat-transfer-labeled, low-density polyethylene bottle of conical shape; inner "valve cap" of high-impact polystyrene which fits over inner cylinder of threaded cap above; inner cap of medium-density polyethylene, with restricted opening at top to accommodate pin; applicator of urethane foam laminated to mohair mounted on a wire pin, and flared outer cap of conventional polystyrene. Note two sets of threads on bottle neck to accommodate inner and outer closures. Applicator for other liquid colors is a wool ball with similar pin.*

Wool-ball applicator *permits smooth application of non-white liquid shoe polish. Bottle for white dressing only is equipped with urethane-foam-and-mohair applicator.*

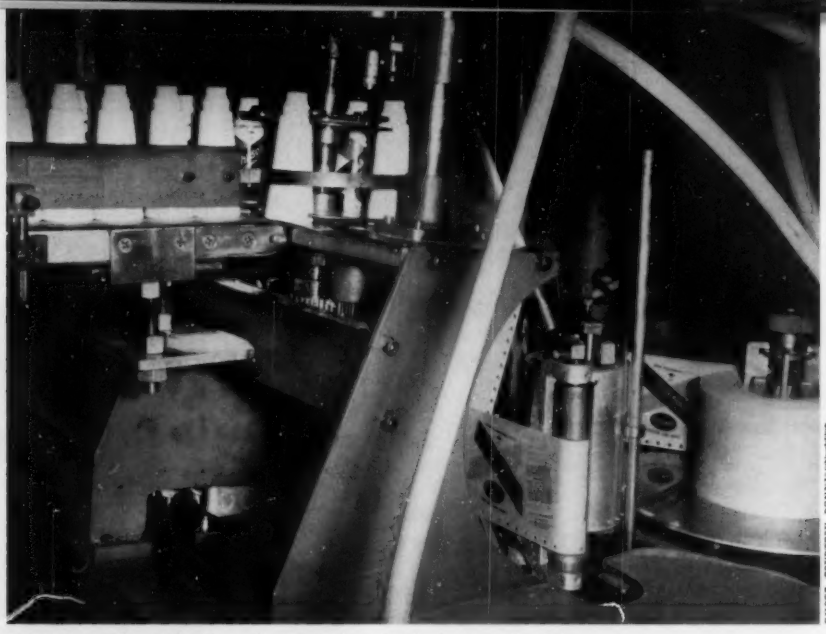


PHOTO COURTESY DENNISON MFG.

Heat-transfer labeling *of polyethylene bottles for liquid polish required modification of standard machine in supplier's plant. Web of paper tape bearing transfer labels is fed from roll (lower right) up and across rocker arms (upper center) so it can rock up and down in a 4-in.-high area to apply labels to cone-shaped containers, first irregular-shaped bottle decorated by this process.*

holding the same 2 fluid ounces. Decorating this shape posed a challenge, however.

The conical shape necessitated the development of new advances in heat-transfer labeling and it is said to be the only decorating method available today which can apply a three-color label to such dimensions at a satisfactory cost. To do it, the web of paper tape containing the transfer labels must swing up and down in an arc while the bottles stay in one plane. In contrast, when round or oval bottles are decorated, web and bottles both remain level.

A special attachment added to the standard labeling machine synchronizes the movement of web and bottles. The machine's turret was raised about 18 in. to allow for movement of the web, although the web itself rocks up and down within a 4-in.-high area. The entire label is satisfactorily put on in one pass through the machine.

The design of this ingenious package, as well as the paste-wax kit, is the work of William C. Harris and his Johnson's Wax design staff.

The package consists of four plastic parts:

1. *The bottle,* blow molded of low-density polyethylene. The opening in the neck is 19/32 in. in diameter to accommodate the dispensing devices. The outer surface of the neck has two adjacent sets of threads. The upper set is of smaller diameter than the lower one for reasons explained below.

2. *An inner cap* of medium-density polyethylene with an inner, center cylinder extending downward about $\frac{5}{8}$ in. and protruding at the top in a raised, tapered section with the $\frac{5}{32}$-in. orifice surrounded by four vertical ribs which project inward from the periphery, but do not quite meet at the center. An orifice in the side of this dispensing cylinder conveys the liquid polish during application. A groove on the inner cap and a bead molded in the bottle neck keep the inner cap from being removed easily.

3. An inner fitment of high-impact polystyrene, shaped like an inverted valve cap of a bicycle tire,

Pre-lithographed *can cover is 5 in. in diameter, looks like this prior to drawing. Design is carefully distorted so as to straighten properly when cover is drawn. Curved bars at bottom are X-shaped in finished can.*

PHOTO COURTESY ROBERT SIDNEY DICKENS.

fits tightly over the bottom projection of the dispensing cylinder. This inner "valve" has a socket in its narrow base which receives the end of the wire pin of the applicator. Prior to first use by the consumer, the depressing of the applicator in turn moves the valve down (as described below).

4. *A flared outer closure* molded of conventional polystyrene, which covers the inner cap and applicator assembly and engages the lower set of threads on the bottle neck.

Protruding from the inner cap is an applicator, mounted on a wire pin, that remains in place during use. For white shoe dressing, this is a soft, resilient pad of urethane foam doubled over and covered with an outer layer of mohair. For other colors, the applicator is a wool ball with similar pin. For white, fine-pored urethane foam is used for control in dispensing as well as for its cushioning property. For the other colors, wool is used because its absorbency and release of the product is more suitable for faster surface treatment.

As indicated in consumer directions printed on the back of each bottle, the initial dispensing action is started when the user, with the heel of his hand, pushes the applicator down as far as it will go. This in turn moves the inner fitment to expose the orifice channel on the dispensing cylinder. This permits the liquid to flow into the dispensing cylinder and along the wire to the applicator.

Once pushed down, the wool ball or foam applicator remains in this position until the contents of the container are exhausted.

The baffled orifice system retards dripping and other waste. Held upside down, the open bottle would have to be shaken violently before any excess polish could be ejected. Nor does the bottle in a tipped-over position tend to drip or ooze. However, there is very little tendency toward tipping because of the bottle's tapered shape and rimmed bottom and the fact that the bottom is its bulkiest part.

Kit for paste polish

Determined that its paste product should be a self-contained kit, since no other shoe-polish manufacturer was known to be offering this feature, Johnson devised an ingenious and practical three-piece can: a base containing the polish, an inner shell holding the buffing cloth in its hollow end and a heat-sealed polyurethane-foam applicator at the other and, finally, a full-depth slip cover to keep all components snugly in place.

The drawn cover and base were imperative because it was found that soldered side seams would prevent proper opening and closing of the can. Also, the cover had to be pre-lithographed.

Pre-lithography of the cans in the flat, from a distorted pattern, is accomplished at the rate of 1,100 cans per minute; decoration of made-up cans would have been far slower—only 125 per minute—and more expensive. Further, when decorating made-up cans, the top must be decorated in one pass through the press and the sides in a second pass. Thus graphic design of the top and sides could not flow together in the way Johnson wished. But a draw as deep as that called for by the package design at first badly abraded the ink at the bottom of the can and the printing tended to go out of register on the lower portion.

Although Johnson's can supplier will not divulge details of the process, it is known that special ink formulations and die lubrication solved the ink-abrasion problem. As to lack of printing control, the design firm chosen to do package graphic took this loss of register into consideration when working out the final design. The bulk of design detail is placed at the top and upper sides [*Continued on page 209*]

PHOTO COURTESY ROBERT SIDNEY DICKENS.

Display rack *holds liberal supply of all products in choice of each color and polish type.*

SUPPLIES AND SERVICES: Polyethylene bottles blow molded by Plax Corp., Hartford, Conn., using Du Pont's "Alathon 20" polyethylene. Inner molded cap by Plax, using Du Pont's "Alathon 34" polyethylene. Flared outer cap by American Can, 100 Park Ave., New York 17, using Kopper's polystyrene. Inner fitment also by American Can, using Foster Grant's "Tuflex" high-impact polystyrene. "Therimage" heat-transfer labeling of polyethylene bottles by Dennison Mfg., Framingham, Mass. Metal cans by Continental Can's Metal Div., 100 E. 42 St., New York 17. Surface design for full line of containers by Robert Sidney Dickens, 908 N. Ernst Ct., Chicago 11.

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PACKAGING PAGEANT

1 New containers with a non-commercial look for 4-oz. Morton Salters are designed to go right to the table. Morton Salt Co. reports increased sales in markets where the new packages were tested. National distribution is now under way. Designs are printed on foil, one in silver and black and the other in gold and copper. Three salters are merchandised in a paperboard tray carrying the familiar Morton design. Foil labels, Forbes Lithograph Mfg. Co., Boston. Trays, Diamond Gardner's U. S. Printing & Lithograph Co., Cincinnati. Design, Ben Larsen, Minneapolis, Minn.

2 A "wall in a box" is the way Virginia Plywood Corp. designates its packaging of six Dancraft Wainscoting pre-finished plywood panels 30 in. high and 48 in. wide, weighing 45 pounds. Corrugated shipping and merchandise container offers positive protection and easy handling, encourages take-with sales. Successful sales are reported in 400 retail outlets east of the Mississippi, where the new product was introduced. Box, West Virginia Pulp & Paper's Hinde & Dauch Div., Sandusky, Ohio.

3 Apothecary bottles selected by Lanolin Plus for its Rybutol vitamin capsules are designed for maximum display of product. The graceful container has appeal for many re-use purposes. Bottle holds a one-year supply. Glass, W. Braun Co., Chicago, and Wheaton Glass Co., Millville, N. J. Polyethylene closure, Wheaton Plastics, Mays Landing, N. J. Label, Gardner-Neumann, Brooklyn.

4 An aluminum foil container serves as a planter for Carol Westlake Originals' new product—Magic Garden Chinese Bean Sprouts. Other components of the package are a bag of seeds and a planting platform. After being soaked in water, the seeds and water are placed in the foil container until the bean sprouts are ready for harvesting in just two or three days. The package is marketed through mail-order houses and gourmet food shops. Foil container, Ekco-Alcoa Containers, Wheeling, Ill.

5 New paperboard packages for Medic full-fashioned elastic hose have extra top flaps, similar to book covers. Outside illustrations show the hose being worn, while the inside of the flap gives information on how to put on the stockings and how to wash them. The flap provides added product protection and, when opened, reveals die-cut panels for viewing product. Package, Lassiter Corp., New York.

6 McGregor-Doniger, Inc., attributes a 10% increase in 1959-60 resort-season swim-wear sales to its new line of Antonio di Monza-designed swim trunks for men in a snap-fastened, re-usable polyethylene package. Idea for the use of the flat snap fasteners on polyethylene bags came from the stationery field, where similar snap fasteners are used for paper mailing envelopes. The 6-by-9-in. waterproof bag is four-color printed. Bag, Flexicraft Industries, New York. "DOT" snap fasteners, United Carr Fastener's Carr Fastener Div., Cambridge, Mass.

7 Spring promotional package for Shulton's Friendship Garden toiletries is a multicolored paperboard basket of folding-box construction, complete with handle. Basket fits into a similarly printed sleeve, to create an appealing gift package. Three items fit in the basket: box of dusting powder, bottle of hand and body lotion and toilet-water bottle. Carton

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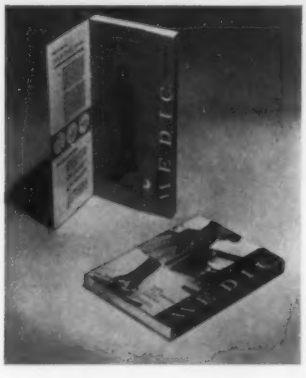

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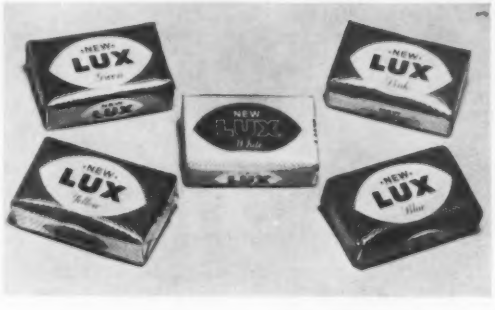
and sleeve. Federal Paper Board's National Folding Box Div., Bogota, N. J.

8 To make shopping easier, red and blue color-keyed caps distinguish between strained and junior varieties of Beech-Nut Baby Foods' new line of three high-protein meat dinners. Identification on rim designates variety contained. The company's "Babyland" trade character (cow for the beef dinner, chicken for the chicken dinner and a lamb for the lamb dinner) are featured on wrap-around labels. Design, Donald Deskey Associates, New York.

9 Redesign of Lux Toilet Soap's foil wrap—the first major design change since its introduction by Lever Bros. in 1955—highlights the product's improved formula by emphasizing the word "new" on both top and front panels. The Lux logo centered in an oval bull's-eye reportedly improves store visibility, especially when bars are stacked vertically. The redesign also permits quicker identity of the white Lux and the four pastel bars. Design, Di Franza-Williamson Associates, New York.



9

10 A practical container with visual impact is this three-piece transparent box for Ekco Products' wall can opener. The triangular section is a fabricated cellulose acetate sheet beaded top and bottom, creased and sealed along one edge, and silk screened in black and white. The product is securely held in position by two thermoformed white high-impact polystyrene inserts locked against the beads at the top and bottom of the acetate section. The inserts are designed to prevent the can opener from moving and simplify the packaging operation. Container, Plastofilm, Inc., Wheaton, Ill.

10

Unique swirling machine, *built by Mennen Food Products, employs rotary platen and punch die to pleat foil and stamp circular hoods from roll stock. Hoods and waste rise on conveyor for separation into storage cartons. Demonstrating equipment is company president, Frederick C. Mennen.*

Better pop-in pack

New swirled-foil hood, efficient new machinery and use of paper closure create a high-convenience pan package of popping corn to retail for 29 cents

A distinctive new pop-it-in-the-package aluminum-foil popcorn container is now on the market which claims significant improvements and economies in the heat-and-serve packaged-food field.

The new foil container has been introduced by Mennen Food Products, Inc., La Porte, Ind. (23 employees). Offering new strength and convenience advantages, it uses two new packaging machines and several innovations in pan design that help hold the product's price to 29 cents. Designed for pegboard display, the package reportedly has chalked up excellent repeat sales for the company.

Called "Jiffy Pop," the container has a strong wire handle firmly crimped to a heavy-gauge foil pan. The pan, containing unpopped corn, salt and

cooking oil, is sealed with a thin-foil hood, formed in advance in the packaging plant in a collapsed swirl pattern to facilitate unwinding and expanding into a dome shape during popping to make room for an astonishing gallon of finished popcorn.

Jiffy Pop requires no carton. Instead, a special and economical waxed and printed paperboard disk lid is crimped over the foil hood to provide a tight closure. A circular tear strip permits quick removal of this lid, leaving intact the crimped edge of the pan that holds the wire handle.

Key mechanical elements in the straight-through packaging line are the two machines: one for swirling the foil hood, the other for crimping the hoods, paperboard lids and wire handles to the foil pans. The conveyorized packaging line, which also includes standard fillers, reportedly achieves low assembly costs at an output of 45 units per minute.

The swirling unit, designed by Mennen, automatically cuts an 18-by-18-in. sheet of 0.00035-in. foil from a roll feed and, by means of a rotating platen, crimps the metal in a circular pattern. A die then punches the disk from the square sheet, ejecting it from the machine onto a conveyor.

Meanwhile, foil pans travel by another conveyor under three fillers, where they receive measured portions of salt, corn kernels and oil. Passing along this conveyor, the pans are crowned with their spot-welded wire handles, foil hoods and paperboard lids, then enter the crimping machine where a special die folds the vertical flange on the edge of the pan. This crimp seal securely closes the package, restricting moisture transfer and firmly binding handle and lid.

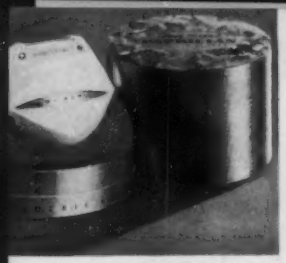
Specialized as it is, the package, which appears headed for sales success, demonstrates that even the best of packages can be improved upon by an alert packager who will give it time and research.

SUPPLIES AND SERVICES: Foil pans, roll foil and Model 310 crimping machine by Reynolds Metals Co., Richmond 18, Va. Waxed disk lids by Chicago Carton Co., 4200 S. Crawford Ave., Chicago 32.

Closing machine *contains die with sufficient tolerance to crimp vertical pan flange over bulky wire handle, foil hood and paperboard lid.*

Innovations *in pop-in-pan foil package (above, left) include paperboard lid and wire handle. Circular tear strip that goes around the disk (arrow) enables removal of lid, revealing swirled foil hood that expands during popping and is broken open to expose finished popcorn (above). Container is designed for pegboard display.*

Components *of new pop-in pack and product include solidified oil (white disk, left), corn and salt (right), which go into foil pan. Handle is crimped into place under hood and lid.*



1-A PERSONAL AIDS

1-B APPAREL

1-C SOAP

1-D PHOTO

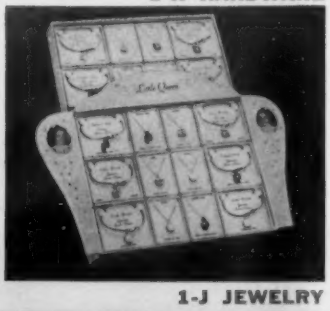
1-E GIFT

1-F COSMETICS

1-G FOOD, BEVERAGES

1-H HARDWARE

1-I HOUSEHOLD



1-J JEWELRY

1-K MISC.

1-L COSMETICS

1960's winning

Pictured here are the 31 first-award winners of the National Paper Box Mfrs. Assn. showing

Impressively, the ability of the set-up box to assure product protection, effective counter display and to upgrade merchandising appeal through modern techniques of box making was demonstrated by the 2,406 entries in the 10th Annual Set-Up Box Promotional Competition sponsored by the National Paper Box Mfrs. Assn. All entries were on exhibit at the association's annual convention in the Jung Hotel, New Orleans, April 27-May 1.

Ninety-nine entries were singled out for 31 first awards and 68 "excellence in packaging" awards.

Following are descriptions of all first-award winners, keyed to the photographs on these pages. A listing of 68 citations for "excellence in packaging" may be obtained from National Paper Box Mfrs. Assn., Broad & Arch Sts., Philadelphia.

Class 1. Superiority according to use

1-A. The award in *personal accessories* went to F. N. Burt Co. for Schick, Inc., Lady Schick Shaver box. Feminine appeal is achieved by oval shape and appealing use of blue and gold coverings. Shoulder-style construction adds beauty and gives shaver good protection. To hold the shaver erect for display and to provide quick easy loading, a nest-shaped tray formed of cotton-flocked acetate snaps into the base. Cord is stored under nest.

1-B. Jantzen brassieres box won the *women's apparel* award for Pacific Paper Box Co. (Los Angeles). White lid on a red base and well-chosen decorating give distinction to a nationally known brand. Three sizes make it possible to gift package an individual item or a set of three.

1-C. Stecker Paper Box Co. won top honors in the *soap* category for Beauty Counselors, Inc., soap box. Basic set-up box base-lid combination has overwrap with surface design to complement contents. Floral pattern incorporates colors to match the soap. White oval areas tie in with the soap shape and provide space for product identification.

1-D. *Photographic supplies* award was won by Consolidated Paper Box Co. for Polaroid Corp.'s No. 80 camera-set box. Acetate cover on box with gold-colored overwrap makes an attractive display. Foam-plastic platform is designed to protect contents in shipment and to provide pleasing back-

set-up boxes

among 2,406 entries in 10th competition

upgrading through better box-making

ground for effective display of camera and parts.

1-E. In *holiday box* category, the award was made to Master Paper Box Co. for Carson Pirie Scott & Co.'s retail gift boxes. Combination of wide lines in red, gold, blue, green and white provides distinctive motif. Store name appears at spaced intervals. These boxes in varying sizes help build store personality.

1-F. Winner for a *round cosmetic box* was F. N. Burt Co. for The Borden Co. Marcelle Dusting Powder, designed by Robert Buechert. Band and top label make a striking design, easy to identify and to remember—an important factor since the powder is non-allergic. Colors are black, pink and blue.

1-G. Boxcraft Paper Box Co. captured first place in *food and beverages* for Paul Masson Vineyards' imaginative Candle and Champagne box. Lid-wrap picture, arrangement of bottle, candle and candle holder are all highlighted by use of pink and black. Paper-overwrapped corrugated board is used for base and partition to protect heavy contents.

1-H. The award in *hardware* went to Standard Packaging Corp., Bradley-Gilbert Div., for American Saw & Tool Co.'s saw-blades box. Fashioned in the style of a record album, the box promotes sale of different saw blades normally sold individually. Colorful design suggests purchase as a gift. Box is planned for re-use to store the blades.

1-I. First place among *household products* was awarded to Fair Martin Boxes, Inc., for Lily Mills Co. knitting-yarn kit, designed by Amelia Willson. Box within a box holds yarn for making a carriage robe for baby. Transparent container tells the complete story of contents. Cord provides a convenient handle. Exterior box with braided cords serves as a carrying kit for salesman.

1-J. The Mason Box Co. won the *jewelry* award for Donley Mfg. Co. children's and teen-age jewelry box, designed by A. R. Cinami. New unit of set-up box construction displays small-boxed jewelry items for youngsters. A drawer underneath holds a reserve of 24 items. There is an easel back and protective cover lid.

1-K. In the *miscellaneous box* group, the winner was Stecker Paper Box Co. for G. P. Kent & Associates' Legacy Wedding Gown storage box. After

1-M TOYS

1-N DRUG MAILER

1-O OFFICE

1-P PROMOTIONS

1-Q CONFECTIONS

1-R PAPER GOODS

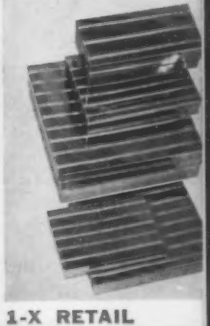
1-S DRUGS

1-T SPORTS

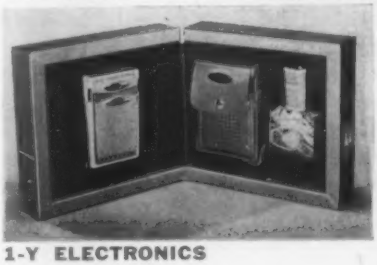
1-U MAILERS

1-V SHOES

1-W TEXTILES

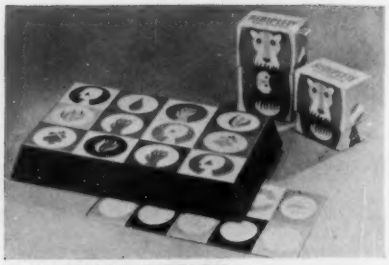


1-X RETAIL

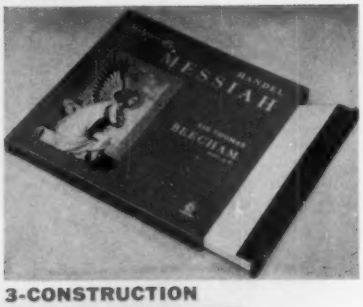


1-Y ELECTRONICS

1-Z APPAREL



2-SURFACE DESIGN



3-CONSTRUCTION

4-DISPLAY

5-TRANSPARENT

6-SPECIAL CONSTRUCTION

the wedding, the gown, cleaned and sealed in this storage box, may be protected for years. The gold-decorated cover has a transparent window to view the gown without disturbing the seal. Platform has spaces for other wedding accessories.

1-L. The *rectangular cosmetic box* award went to Heminway Corp. for Prince Matchabelli, Inc., Cologne Threesome box. Red velvet ribbon, embossed with three Prince Matchabelli golden crowns glued around this new white package, brings color and eye appeal to an open display set-up box. Three bottles rest on a white and gold-trimmed platform. Tight-fitting arrangement of contents in lid and base assures protection.

1-M. Cadaco-Ellis' Foto-Electric Football Game box won the *toys and games* award for Elegant Paper Box Mfg. Co. Designed by C. Leslie Crandell, the well-constructed package gives all "playing" details. Surface design is planned for appeal to all ages. Unusual interior construction features play viewer and bulb attachments.

1-N. Four smiling spoons pictured on box covers are used as the attention getters on Smith Dorsey Co.'s Triaminic Pediatric drug promotion box which won *drug mailer and promotional box* award for Packaging Corp. of America. A heat-formed, polystyrene-foam platform holds four bottles of Triaminic Syrup and four spoons. Protective cover is provided for safe mailing.

1-O. A display package for The Waterbury Pen Co. won top honors among *office supplies* for The Manufacturers Box Co. The compact retail display package presents colorful, sterling silver pens. Open lid is held in position with a black ribbon. Base is lavender. Box is shipped ready for display. Individually boxed pens are protected without the need for any expensive wrapping.

1-P. First in *promotional boxes* went to The C. W. Zumbiel Co. for Procter & Gamble "Knock On Any Door" program. A novelty construction of multiple opening doors furnishes descriptive material about Crest, Gleem and Royal Drene. A pull-up display on back affords flash-copy punch. Doors have silver knobs. Items are revealed on velvet backgrounds.

1-Q. Pacific Paper Box Co. (Los Angeles) won in *confections* for Sterling Food Products' dried-fruit boxes, designed by Henry Chew. Loose-wrapped set-up box family reportedly increased sales above all expectations. Fresh, appetizing look is achieved by golden sunburst effect over glossy-white lid paper. Red lettering adds color balance.

1-R. In *paper products*, the winner was Consolidated Paper Box Co. for Yankee Artists, Inc., art greeting cards. Transparent plastic permits shopper to find the "special card." The base of this set-up box is gold colored with black scrolled lines. Package was cited as good example of set-up box combined with plastic materials.

1-S. The J. F. Friedel Paper Box Co. won in *drugs and pharmaceuticals* for a colorful display unit with handy dispensing system made for Faichney Instrument Co. Apex Thermometers. Three gold pull tabs release three different types of individually packed thermometer boxes. Hinged-top lid permits easy restocking by the retailer.

1-T. Norristown Box [*Continued on page 202*]

Bake-in-package produce

Suffolk Farms introduces a new principle with wrapped tray of squash which requires no preparation, but is simply popped in the oven unopened for better retention of moisture and flavor

Cook-in-the-container convenience has now penetrated the produce field with a new overwrapped-tray package for fresh squash, reported to withstand oven heat of 400 deg. F., in which the squash can be baked prior to opening. The paper, foil and plastic package eliminates preparation of the product by the housewife, retains desirable moisture both before and during baking and enables it to go from market to table without being handled.

Developed by Suffolk Farms Packing Co., Chelsea, Mass. (75 employees), the new package consists of a glue-tab tray made from 24-pt. double white-lined manila board lined with 0.00035-in. aluminum foil. A 1-mil polyester film wrap, plus a thermoplastic label printed with brand identification and baking instructions, complete the package.

Suffolk Farms' packaging line, paced by a standard automatic wrapping machine, is constructed for an output of 25 packages per minute. Here, each large yellow squash is cut into sections, cleaned and hand packed into the 8-by-3-by-1-in. trays. Next the trays are run through the overwrapping machine, where the printed polyester film is firmly heat sealed around the product and tray, and the thermoplastic label is heat sealed around the sides and bottom of the package. Packages are then weighed, priced and coded on an automatic weigh-price scale.

The housewife pops the package into the oven without touching the tightly sealed wrapper and cooks the product until tender (about an hour) at a temperature of 350 deg. F. The vapor barrier provided by the film conserves moisture in the product and reportedly preserves its natural flavors and juices better than conventional cooking methods.

Suffolk Farms has no immediate plans for expanding this packaging technique to other products, but the hermetic bake-in package could have broad applications in the produce field, adding to fresh vegetables a dimension of convenience comparable to that of frozen and processed food products.

SUPPLIES AND SERVICES: Foil-lined tray by Sutherland Paper, Kalamazoo, Mich. "Mylar" polyester film by Du Pont, Wilmington, Del. Model FA wrapping machine by Package Machinery, East Longmeadow, Mass.

Ready-to-bake package *for cut-up yellow squash employs foil-lined, glued paperboard tray with printed polyester film overwrap to resist oven temperatures of up to 400 deg. F. and to retain product moisture and flavor. Overwrap and thermoplastic-coated paper label containing full instructions are removed after baking.*

Industrial 'six-pack' cuts costs, speeds handling

The Formica Corp., Cincinnati, bids for a 30% saving in the cost of packaging laminated-plastic building sheets via the combination of a "six-pack" kraft-paper specialty bag and a semi-automatic loading machine. The company reports that its new packaging system—which replaces a manual operation and wood-reinforced corrugated shipping containers—eliminates most of the manhandling of finished sheets. Costs also are cut by an increase in packaging speed and by substantial economies in storage space, shipping weight and tare weight afforded by the new paper container.

At Formica's plant, a flat, sewn-end specialty bag (right in photo) is positioned at the mouth of the table-mounted loading machine. When the operator presses a button, an air-activated plunger grasps and opens the bag. Simultaneously, a ram guides six stacked plastic panels (upper left) into the bag and pushes its open end off the mouth of the loading unit. The bag's open end remains unsealed, to permit visual classification of the contents. During the rapid packaging operation, a second worker applies a data card to the paper bag. *Specialty bag and sheet-packaging machine by Bemis Bro. Bag Co., 408 Pine St., St. Louis 2.*

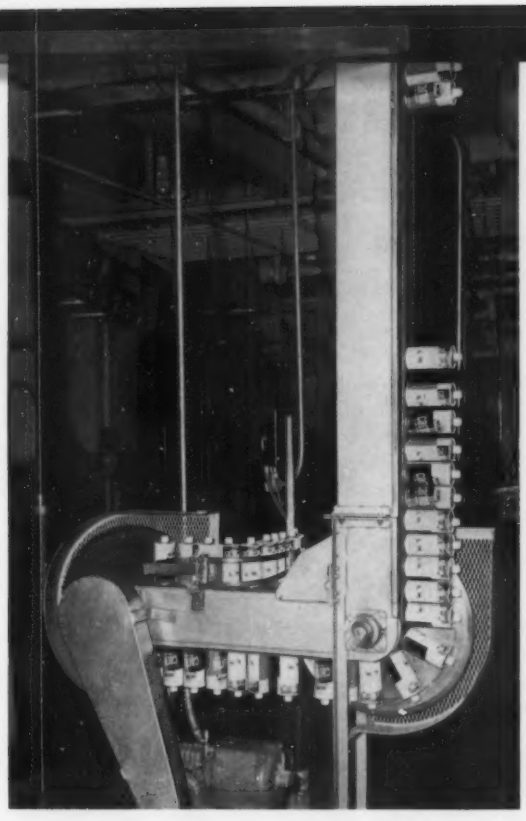
COST

50% less for shipment

One way to beat the bugbear of rising production costs is to cut the cost of shipping the product. Acting on this sound packaging philosophy, Automatic Electric Co., Northlake, Ill., has slashed by half the cost of packaging telephone components for shipment to customer companies.

The packager has achieved this cost reduction by switching from traditional workmanlike wooden boxes (right in the accompanying photo) to specially developed corrugated shipping containers (left). According to Automatic Electric's methods engineer, William F. Mackay, the new corrugated shipper not only reduces shipping weight some 10 lbs. per unit, but also offers several production short cuts. Says Mr. Mackay: "By using a convertible end pad which we devised, one size of carton accommodates three sizes of telephone relay strips. The same end pad plus a corrugated filler pad permits the packaging of either short or long telephone relay strips in the same carton."

Savings aside, the easy-open corrugated carton is reported to survive the rigors of climate and physical abuse without damage to delicate telephone components. *Carton by Union Bag-Camp Paper Corp., 233 Broadway, New York 7.*



Magnetized for efficiency

A magnetized conveyor system that holds empty metal cans in position as they travel down a 90-deg. turn from a second-floor unscrambling room to the filling area on the floor below is credited with increasing the efficiency of the wax-products filling section at S. C. Johnson & Son's plant in Racine, Wis. The packager reports a 5% reduction in labor and operations costs since adopting the new system, which is said to eliminate the down time required to change can chutes on conventional lines. Can sizes and shapes within Johnson's wax-products line can be alternated without mechanical change-over.

Speeds of up to 150 per minute are achieved in transporting cans from dumper to filler, says the company. A continuous chain of magnetic components located beneath the moving conveyor belt holds the metal containers securely in place. At the bottom of the perpendicular "drop" from the second floor, the cans take still another 90-deg. turn, to travel upside down for a short distance before taking a final 180-deg. turn that enables them to pass in conventional stand-up position through the filling station. *"Magnamation" magnetic conveyor-belt components by Eriez Mfg. Co., Erie, Pa.*

CUTTERS

Cushion sheets protect glass product at less cost

Doubled packaging speed, better product protection and a reduction in over-all packaging costs are reported by American Lamp & Shade Co., Philadelphia, since adopting springy paper interleaving sheets for individually wrapping fragile glass lamp shades and metal bulb fixtures. Since both items are shipped in the same corrugated carton, effective interior cushioning is required to insure that the lamp shade will arrive at its destination in one piece.

Formerly, the packager separated product components by stuffing shipping containers with liberal amounts of cellulose wadding and newsprint. But this technique required a bulky carton, overweighted with cushioning material. Worse yet, breakage was high. These problems have been solved with the new interleaving sheets. Made up of 80% kraft and 20% clean news, the material has a raised surface pattern to impart greater cushioning protection. Only two sheets of the paper are needed, one to wrap each component. As a result, shipping-carton cube has been cut 22% and package weight has been reduced 47%. And, says the company, breakage is virtually nonexistent. *"Sherm-A-Pak" interleaving by Sherman Paper Products, Newton Upper Falls, Mass.*

Functional *nozzle-type polyethylene squeeze tube scores with consumers, who like its dispensing convenience. Tough blow-molded plastic container has ended complaints of punctured or leaking tubes.*

Linerless tube for oil

Phillips Petroleum solves a packaging problem and keeps costs down with an impermeable linear-polyethylene container that needs no barrier support to hold outboard-motor gear oil

In what is reported to be its first use without a liner to contain a penetrating product of this nature, the thin-walled, linear-polyethylene squeeze tube is scoring a packaging success as a dispensing container for outboard-motor gear oil. Judged on performance, ease of handling and economy, this permeation-resistant blow-molded plastic container holds the promise of application for many other similar semi-liquid products.

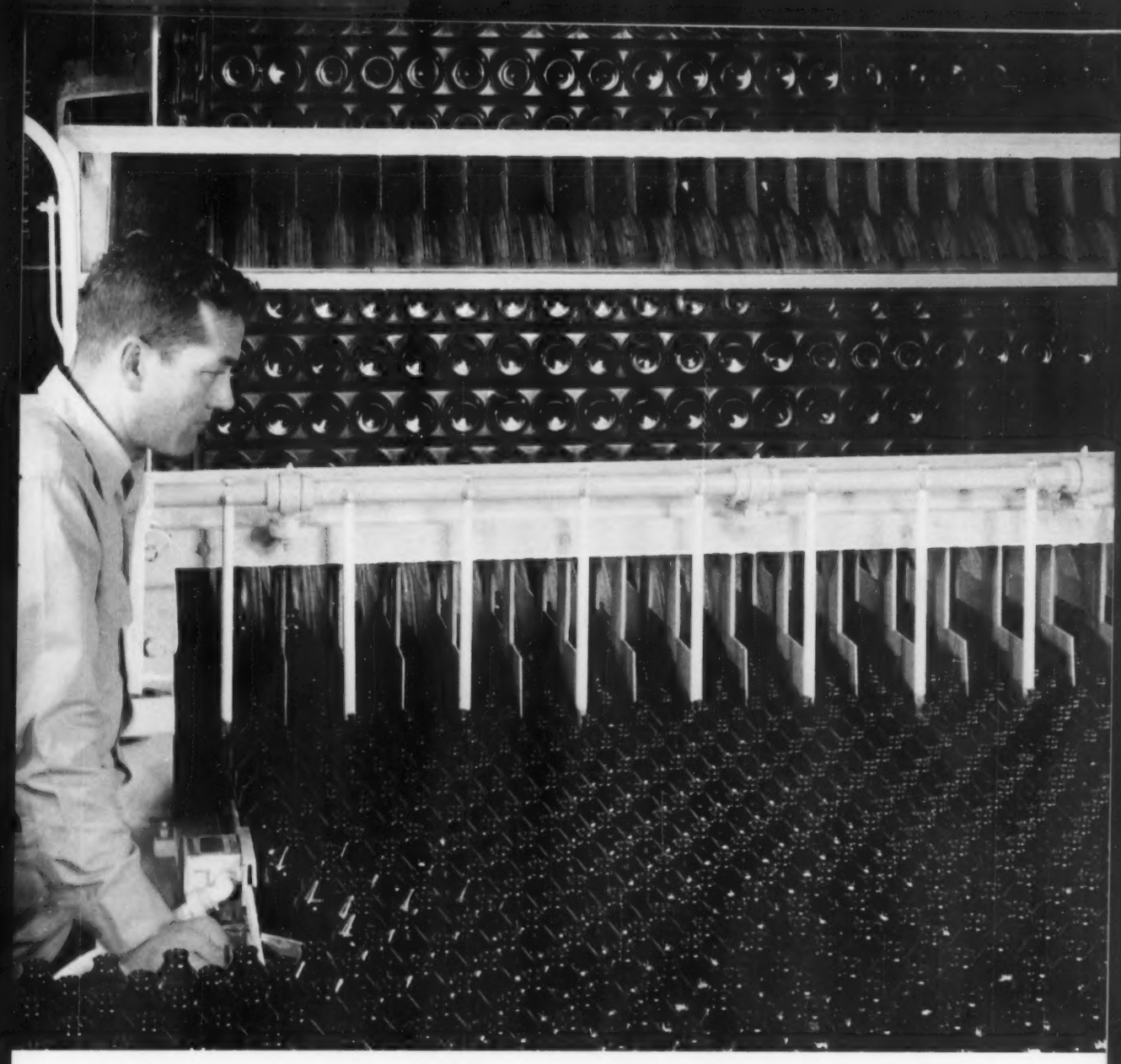
The new bottom-sealed tube is being used by the Phillips Petroleum Co., Bartlesville, Okla. After extensive testing to prove out linear polyethylene's superior impermeability to oil, the 8-oz. plastic package has been distributed by Phillips to some 20,000 retail outlets across the country.

Formerly, the company packaged an outboard gear grease for similar use in a collapsible metal tube. Its drawbacks, says the packager, were: it was easily punctured, the product tended to leak through tube seams and it lacked functional appeal.

Phillips reports that the new plastic tube, with its hand-applied, injection-molded, linear polyethylene cap, has solved all these problems, at no increase in packaging costs. Blow molded in one piece, the nozzled tube body has no neck joint or side seam through which oil might leak. (Supporting this point, the company says it has received no complaints of leakage since adopting the new container last fall.) Linear polyethylene's toughness and impermeability also are protection against oil strike-through or accidental puncture of the tube's 20-mil walls. And, of course, the plastic squeeze container's inherent resilience eliminates the need to roll up the tube to expel the contents.

The white plastic tube is offset printed in red, black and blue. Filling and bottom sealing are performed at 40 to 45 containers per minute on a slightly modified standard tube-handling machine. Heavy-duty clamping-jaw springs are used. In addition, the sections of the clamping jaw which contact the extreme ends of the tube bottom during sealing have been relieved so that opposite edges of the seal are rounded, rather than flared as in conventional tubes. This seemingly minor modification, says Phillips, eliminates the potential of stress cracking at the seam during long-term storage, while adding to the container's attractiveness.

SUPPLIES AND SERVICES: Tube and cap by Plax Corp., Hartford, Conn., using Phillips Chemical's Marlex 5003 high-density resin. Contract packaging by Penn-Central Co., Kansas City 3, Kans., using Saga Packaging Machinery's Model FS-22-p filler-sealer.



"Knox improved our quality, helped boost production," says major southern brewer

"Since our production rate is growing so rapidly, we continually make maximum demands on our bottle suppliers for top quality, lighter-weight, better color, faster delivery," says the Assistant Superintendent of one of the south's best known breweries.*

"Because ours is a high-speed operation *(up to 408 bottles a minute)*, it is essential that the glass we use be able to withstand severe handling, rapid temperature changes, constant jostling on conveyor lines, and rapid-fire passage through pressure-filling machines.

"Knox Glass, one of our two major suppliers, has made improvements in the quality of glass we use, and has gone a long way toward helping us maintain and boost production speeds.

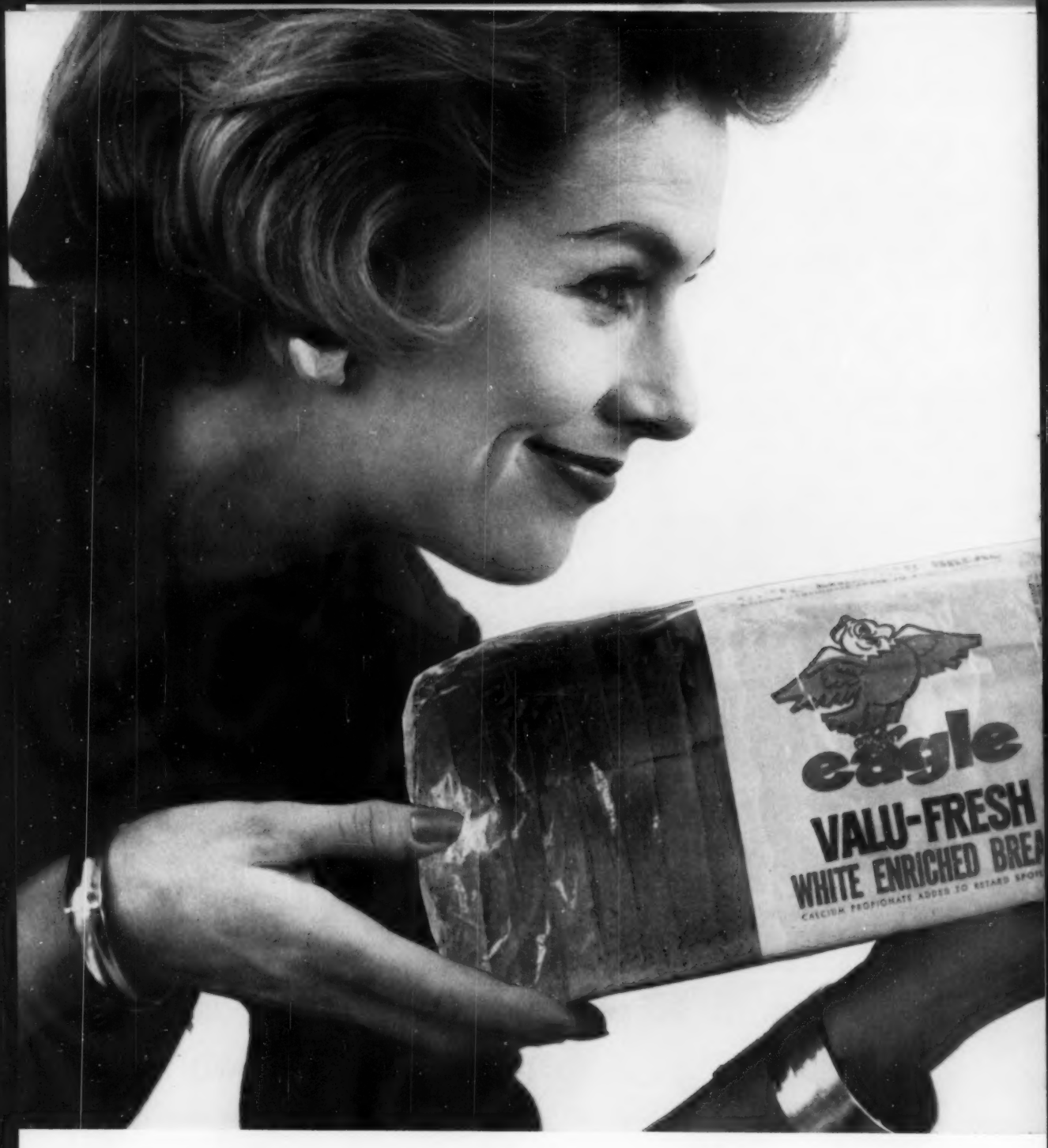
"Often, Knox's representatives," he continued, "practically live at the plant, working closely with our production line people in solving engineering problems connected with the handling of bottles.

"In addition, Knox has re-designed their glass product during the last two years, and is now furnishing us a lighter bottle for 12-ounce and 32-ounce quantities. They have also helped us introduce the new 12-ounce Handy Beer Bottle (GCMI-168). All this, of course, has greatly reduced our freight costs."

Find out what "the new/Knox Glass" can do for you. Contact Knox Glass, Inc., Knox, Pa., or any one of 37 sales offices throughout the nation.

*Name available on request

the new / **KNOX GLASS**



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* *Calculated on the basis of about 100 actuations per aerosol . . . from the 56 uses of an air sanitizer through the 198 times actuated tooth paste container, not including foreign production.*

Technical & Engineering

Charles A. Southwick, Jr., *Technical Editor* Robert J. Kelsey, *Engineering Editor*

Irradiated polyethylene film

Biaxial orientation with electron bombardment produces a strong, clear, glossy material that can be shrunk to create unusual packaging applications.

By Robert D. Lowry and William G. Baird, Jr.†*

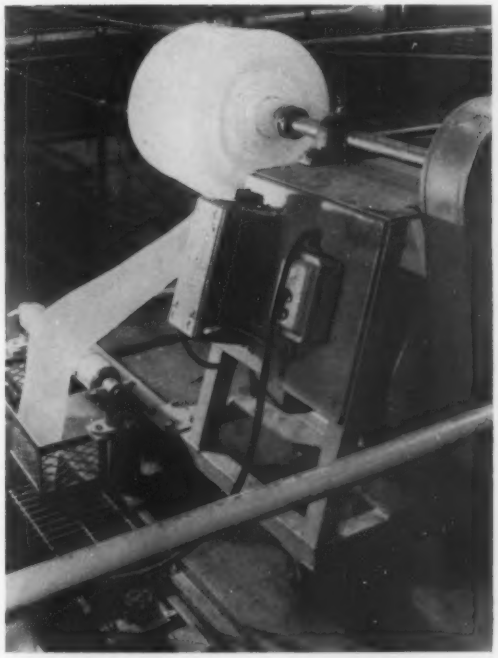


Figure 1. *Start of irradiation process. Polyethylene film, extruded as a comparatively narrow tape, feeds into a vault extending 30 ft. below ground, where a G.E. electron beam generator bombards it with high-energy radiation prior to stretching and rewinding.*

Polyethylene manufacturers have long realized that many desirable characteristics could be added to their film if it could be oriented in both directions. This two-way orientation could build a shrink characteristic into the film as well as add inherent strength through increasing the tension of the molecular structure by stretching.

The question was, how to do this. Simple mechanical orientation would not work because the molecular structure of low-density polyethylene is "stringy," like the branch of a tree having many other branches extending off in all directions, none of which is linked to another. Attempts to mechanically orient polyethylene have always failed, since the material isn't strong enough to take the stress of orientation on a commercial production basis.

Solution to this problem lay in strengthening the structure of the polyethylene molecule itself by cross linking the branches of the chain together prior to stretching, so that individual elements would not rupture during the orientation process.

Irradiation offered the potential solution. Bombardment of the material with high-voltage energy or electrons would make it possible to cross link the entire structure without essentially changing the chemical properties. In effect, the electron bombard-

*Technical Director and †Special Projects Manager, Cryovac Div., W. R. Grace & Co., Cambridge, Mass.

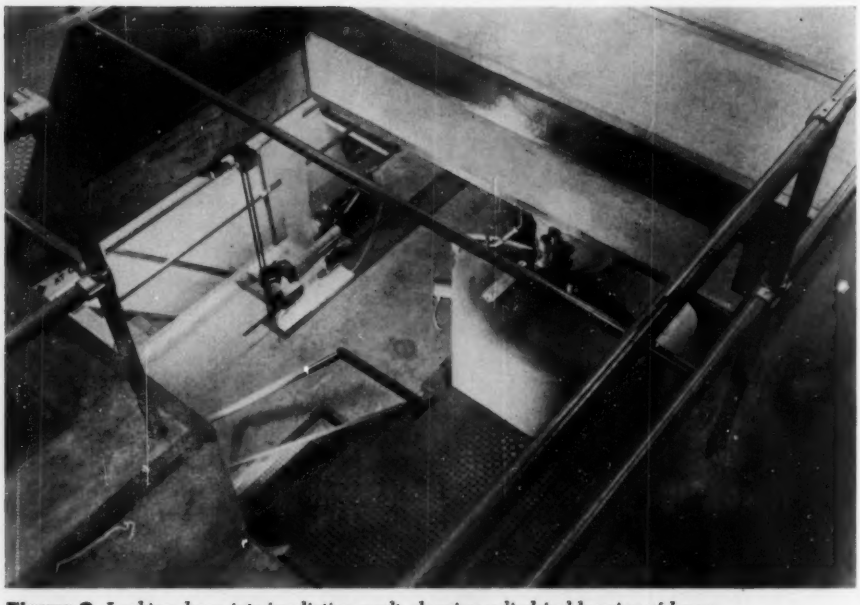


Figure 2. *Looking down into irradiation vault, showing cylindrical housing of beam generator at right center. Note web of film feeding down at left background and under the 2,000,000-volt generator, in which the electron components are protected by an insulating gas. A 2-ft.-thick sliding concrete door covers the vault during operations.*

ment supplied the necessary "links" to tie all of the scattered branches and "strings" into one molecular whole, not easily be broken apart or separated.

The process of cross linking produces a material which is essentially one large single molecule rather than a string of molecules loosely joined together. This in turn makes a material that is very strong and resists heat exceptionally well. Irradiation produces a material that will not melt or flow like conventional polyethylene, as evidenced by its exceptional sealing range of 300-500 deg. F.

During the past several years, W. R. Grace & Co.'s Cryovac Div. has conducted an extensive research program employing the use of high-energy irradiation which successfully produced a cross-linked film having many unique characteristics. While intricate steps of the process are confidential, the manufacturing steps are fairly simple.

First, any low-density polyethylene is extruded into a heavy tape. This tape is then passed under a General Electric beam generator, where 2,000,000 volts of energy bombard the film, cross linking it and preparing it for the next step (Figures 1-3).

After irradiation, the material is heated slightly, then biaxially oriented, or stretched in both directions, more than 100% and is then cooled and "set" in its new dimensions.

The resulting film is then wound into rolls and may be printed and slit to specification and sized for individual customers and applications. At the present time, Cryovac's several generators can turn out more than 2,000,000 lbs. of film per year and the company is expected to install additional production capacity as new markets develop.

Background

The development of the new oriented polyethylene, designated as Cryovac L film, was the result of the company's desire to expand beyond its present markets. Cryovac recognized that the market for its non-breathing bag and film product was limited, while there was a major packaging market for a breathing material that would offer the same shrinking feature and the same strength and appearance characteristics of the saran type of film.

In 1956 Grace acquired the rights to the Sequoia process, which employed a method for irradiating polyethylene to make it stronger, tougher and more heat resistant. Essentially, this process cross linked the polymer in a solid form. Now it remained for Cryovac to apply its long experience in shrinking films to a film greatly strengthened by irradiation.

It was found through an irradiation research program that the biaxial orientation of the cross-linked polyethylene film results in an exceptionally high degree of shrink energy. The film not only shrinks instantaneously down to 50% of its original size at 205 deg. F. and about 20% at 185 deg. F., but also results in a remarkable degree of continued shrink tension that does not allow the film to relax in use even under considerable pressure and fluctuation in temperature and humidity.

Table I: Property-comparison chart of three plastic films

	Cryovac L film	*Low-density polyethylene*	*High-density polyethylene*
General			
Forms available	Rolls	Rolls, sheets, tubing	Rolls, sheets, tubing
Clarity	Transparent	Transparent to translucent or colored	Transparent to translucent
Thickness, in.	0.0005-0.0013	0.0005 or more	0.0005 or more
Yield, sq. in./mil/lb.	30,000	30,000	29,000
Approx. specific gravity	0.92	0.92	0.94 and up
Mechanical			
Tensile strength, lb./sq. in.	8,000-16,000	1,350-2,500	3,000-10,000
Elongation, %	60-90	50-600	5-400
Bursting strength (Mullen), lb./sq. in.	35-45	48	—
Tearing strength (Elmendorf), gm./mil	10-15	150-350	15-300
Folding endurance	Excellent	Very high	Very high
Heat-sealing range, deg. F.	300-500	250-350	275-350
Chemical			
Water-vapor permeability, gm./24 hrs./100 sq. in. at 100 deg. F., 90% R.H.	0.6-0.7	1.2	0.3-0.6
Permeability to gases (oxygen, carbon dioxide)	High	High	Medium to high
Resistance to greases and oils	Swells slightly	Swells slightly	Excellent
Permanence			
Maximum use temperature, deg. F.	Softens at 220 deg. F., does not melt	180 (softens at 230)	230
Minimum use temperature, deg. F.	Minus 60	Minus 60	Minus 60
Resistance to storage	Excellent below 115 deg. F.	Excellent	Excellent

Table II: Special properties of Cryovac L film

Shrink temperature range, deg. F.	170-250, depending on shrink required
Unrestrained shrink at 205 deg. F., %	35-50
Shrink tension at 205 deg. F., p.s.i.	250-450
Haze, %	0.8-1.2
Gloss (Photovolt) at 70 deg. angle, %	103
Stiffness (room temperature)	Soft and flexible

With continued heat application, L film will continue to shrink almost indefinitely (up to 85% at 250 deg. F.). This ability to control the amount of shrink allows flexibility in a wide variety of package applications. The shrink tension of 250 to 450 p.s.i. is greater than with any other of the shrinking materials now available commercially.

A comparison of the properties of Cryovac L film with other polyethylene films is shown in Table I. Its special properties are given in Table II.

Tensile and tear

L film's cross-linked structure has resulted in a film with a tensile strength of more than 10,000 p.s.i., or at least four to six times the tensile

Figure 3. *Closed-circuit television is used to monitor film as it passes under eye of the irradiation unit. Alignment of tape is thus kept under control.*

Figure 4. *Typical shrink-sleeve package. Apples are secured in pulp tray by sheet of film which is first heat sealed on the bottom, then shrunk to a tight, conforming fit by a quick blast of hot air. In this type of package, ends are left open for breathing.*

strength of conventional low-density polyethylene.

Its burst strength of from 35 to 40 on the Mullen test shows its high resistance to package fracture in shipping, handling and consumer abuse, which has already been proved under the most difficult conditions, such as shrinking around sharp-cornered packages, boxes and trays, as well as for the shipment of multiple-layer stacks of both fresh and frozen food products that are of irregular shape with the film surface exposed.

Another key feature of Type L is that, while its resistance to initiate a tear is exceptionally high, once a tear is started it propagates easily, making the use of tear-tab strips practical and thus overcoming one of the present drawbacks of polyethylene film, as well as the laminated pouch materials.

Figure 5. *Shrink cover for this foil pan represents a new sealing concept. Held by a mandrel, the film is first shrunk tightly around and under the rim of the pan; then a second blast of heat shrinks the top.*

Clarity and gloss

The most striking visual characteristic of the L films is their exceptional clarity and gloss. With between 0.8 and 1.2% haze and 103% gloss at a 70-deg. angle, Cryovac L film is comparable in transparency to cellophane.

The material is so clear that stripe markings on the cores used in winding up this material are visible through as much as 4 in. of solid wound film. This clarity is almost as great at the point of sealing and it is still possible to see through up to seven or eight layers of material sealed together.

Sealing properties

From the standpoint of the packaging engineer, perhaps the most outstanding feature of L film is its surprising sealability. Not only can this film be thermally sealed at a temperature range from 300 deg. F. to the extremes of temperature, pressure and time of the sealing mechanism, but multi-layers of L film may be sealed together positively without burning through any layers.

The seal obtained is both strong and completely transparent. The seal strength on this material tests out at 60 to 100% of the tensile strength of the material itself. This overcomes the most serious problem encountered on all packaging materials. L film's wide range of sealing temperatures also permits faster sealing on high-speed machinery without burning and without constant adjustment, although, as with all shrink-type films, the seal area must be restrained until the seal has cooled below the shrink temperature. This has required the development of some new sealing devices which are adaptable to existing packaging machines.

So far, six machines have been adapted for use on the new film. They are: Crompton & Knowles' Wrap King Models F, M and P2, Hayssen's Model 43 LOPQ and Corley-Miller's automatic and semi-automatic frankfurter machines. Four other machines under test run include Package Machinery Co.'s FA-2 and U6 carton overwrappers, Oliver Machine Co.'s Model 899 and a Hayssen carton-overwrap machine. Additional machines are in the test-modification stage and it is believed that two or three more will be adapted before the year's end.

Shelf life and economy

Because it is made of conventional polyethylene, L film preserves its softness, strength and flexibility at all temperature ranges from minus 60 deg. F. to the shrinking temperature of 185 deg. F., making it an ideal package for exposed frozen-food items

where package fracture is a problem in low-temperature handling and storage. Like ordinary polyethylene, L film is also completely unaffected by changes in humidity and may be stored at any temperature for an unlimited time and under any humidity conditions from minus 60 deg. F. to 115 deg. F.

The company expects that continued improvement in production efficiency as output increases will enable it to continue to offer this film at its present competitive selling price of 3 cents per 1,000 sq. in. for 1-mil plain film, a price which makes this film attractive for a wide range of products which heretofore could not afford the high cost of most of the commercially available shrinking materials.

Physical properties

In addition to key features mentioned above, the accompanying property tables show a wide range of physical properties of L film, some of which are worthwhile discussing here:

Low WVT rate. L film is an excellent moisture barrier, with a WVT of 0.6 gm. per 24 hrs. per 100 sq. in. at 100 deg. F. and 90% relative humidity, making it comparable to both medium-density polyethylene and polypropylene, and considerably better than conventional low-density polyethylene.

Gas transmission. L film is a high gas-transmission film with an oxygen permeability of from 7,000 to 8,000 cc. per 24 hrs. per 100 sq. in. of 1-mil film, making it promising for the packaging of various products that require oxygen permeability, particularly fresh meats and poultry.

Thickness and yield. L film can be manufactured in thicknesses of from 0.5 mil to 2 mils, with a production yield of 30,000 sq. in. per pound of 1-mil film. At the present time, 1-mil film is being sold for most commercial applications.

Printability. L film has been printed successfully, after surface treatment, in up to four colors on a flexographic press and can be printed on rotogravure equipment. Ink adhesion to Cryovac L film also has been rated excellent.

Machinability. L film can be used successfully in machinery designed for polyethylene and other soft, non-supported films. The sealing machine has to be modified by adding components to cool the seal. Machinery has also been adapted to provide newer concepts in packaging, such as the shrink sleeve and the shrink cover, which will be described in the section that follows.

New packaging concepts

Unique shrinking characteristics and high shrink energy of L film have made it possible to develop several entirely new concepts in package design, which will require entirely new approaches to high-speed equipment and will also make possible radical simplification and speed-up of present automatic wrapping equipment.

Shrink covers. Perhaps the most exciting of these is the development of a new method of covering aluminum foil and molded-pulp food trays for all types of bakery and processed-food products, as well as general lines of merchandise. In this application (Figure 5), the film is placed on top

Figure 6. *Packaging of frankfurters at Schonland's Packing Co., Manchester, N. H. Package with seal side up is passed under moving Teflon heating belt, after quick hand wrapping from roll of printed irradiated film at right.*

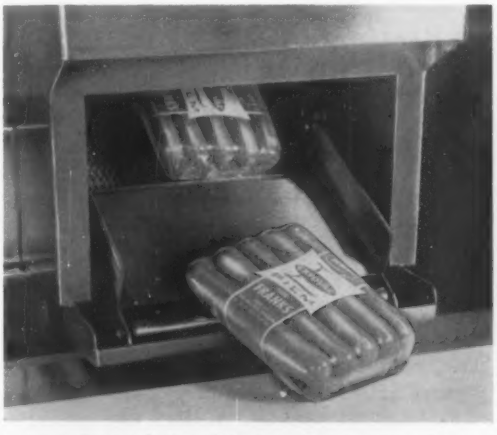


Figure 7. *Finished frankfurter packages emerge from shrink tunnel. Here demonstration band has been applied.*

Figure 8. *Cut fresh poultry in a molded-pulp tray is quickly hand wrapped on a jig, with Cryovac L film folded underneath.*

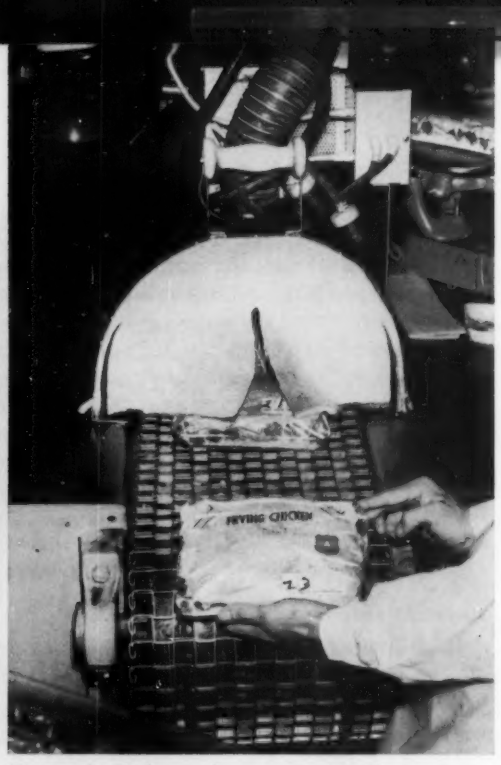


Figure 9. *Chicken package emerges from hot-air heating unit which has shrunk film to a tight fit. Scene is at Plus Poultry, Siloam Springs, Ark.*

of filled trays; the film is held on top while a jet of hot air shrinks the edges of the film down and under the lip of the tray or pan, closing it tightly all around. A second application of hot air then lightly shrinks the top of the cover to a drum-tight fit. The whole application is fast and uses simple machinery, the film itself providing the closing action, using its available shrink energy.

At the present time a number of bakers and food-catering companies are using this process successfully and high-speed automatic machinery capable of producing up to 120 units a minute is now in development. Semi-automatic machinery now available is capable of 20 to 30 units per minute.

Shrink-tube package. For products where a hermetic seal is not required, particularly non-foods, Cryovac has developed a process which involves rolling items like window shades, shelf lining and multiple units of dowling in a sheet of film and passing the package through a shrink tunnel without sealing. The high shrink energy of the film locks the ends of the package so snugly that the necessity for a side seal is completely eliminated. This method permits really high-speed production using hand-wrap methods and the simplest of equipment. A number of commercial applications of this new package have already been developed.

Shrink-sleeve package. Another new packaging concept is the shrink-sleeve package for produce (Figure 4). In this application L film is wrapped around the produce in a tray to form a band, leaving the ends of the package open for the ventilation needed for many fruits and vegetables. The film under the tray is sealed on a moving sealer-cooler unit and then shrunk over-all, thus clamping the produce in place. The resulting package is skin tight, highly attractive and capable of withstanding normal shipping and store-handling abuse. Three of the country's largest fruit and produce packagers are in production on this package.

Twist tie. Another outstanding produce package in L film is produced by rolling up any large, bulky produce item, such as lettuce, broccoli or celery in a sheet of film, holding the ends while placing the package on a moving belt which twists the package until the ends are tight curlicues. The package is then passed through a hot-air shrink tunnel. The resulting package is tight and tough, and provides improved appearance at a competitive cost.

Present and potential uses

L film is now being supplied in substantial commercial quantities for these applications:

Fresh and frozen tray-packed poultry. L film's unique combination of high shrink, toughness and exceptional clarity in a so-called "breathing" film has made it an ideal package (Figures 8-9) for the shipment and handling of pre-packaged fresh cut-up chicken, where spoilage, poor shelf life, bad breakage and appearance have [*Continued on page 226*]

Measuring gas transmission

A method for uniform gassing and sealing of pouches filled with milk powder permits evaluation of materials to find the necessary efficiency at the lowest cost. *By J. F. Carman*, C. P. Bolton† and P. M. Sautier***

In the past few years the interest and activity in the packaging of food products in an inert atmosphere has greatly increased, the major purpose being to control oxidation which causes rancidity in some products. The range of products now gas packed is both varied and numerous. Powdered whole milk, powdered cream (1),[1] dehydrated potatoes (2), dry soup mixes and many other products have all been packaged in flexible pouches in an inert atmosphere.

This article concerns itself with the evaluation of gas packaging as applied to milk powder containing relatively high levels of fat which oxidizes when subjected to certain conditions.

There are two important things to remember about dry milk containing fat:

1. *The smaller the package, the more rapid the occurrence of oxidation and rancidity.* It has been found that while a non-gassed 50-lb. multiwall bag (0.002-in. polyethylene liner) containing powdered whole milk maintains good flavor for three to four months at room temperature, the same product ungassed in a 5-lb. bag (40-lb. paper/10-lb. PE/0.00035-in. foil/20-lb. PE) becomes oxidized in less than two months. The area of packaging material per pound of product is 74.8 sq. in. for the 5-lb. bag and 37.6 sq. in. for the 50-lb. bag. This relationship would be even more evident when packaging quantities are less than 5 lbs.—for example, 3.2 oz.—in a pouch.

2. *The lower the temperature, the less rapid the oxidation.* Powdered whole milk retained good flavor for three months (end of test) at 38 deg. F., for one month at room temperature and for one week at 100 deg. F.

Therefore, if it is desirable to package a single-service pouch of milk powder containing fat, to be distributed without benefit of refrigeration (a costly operation), the product must be packaged using an inert gas, such as nitrogen or carbon dioxide. Nitrogen is commonly used because of lower cost and it is less likely to contribute off-flavor to the product.

Basically, there are three factors involved in this type of packaging which contribute maximum effectiveness to the finished product:

1. *The initial gassing of the product prior to*

*Packaging Research, †Head of Packaging Research and **Head of Mechanical Development, Research Laboratories, The Carnation Co., Van Nuys, Calif.

[1] Numbers in parentheses identify References appended.

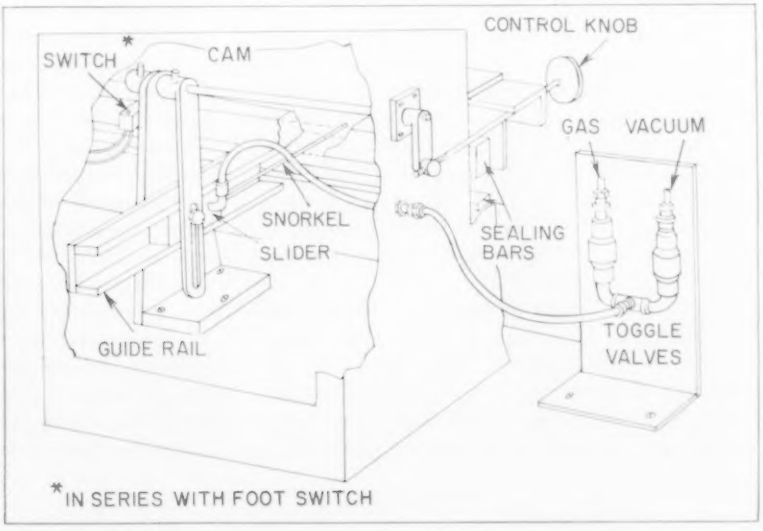
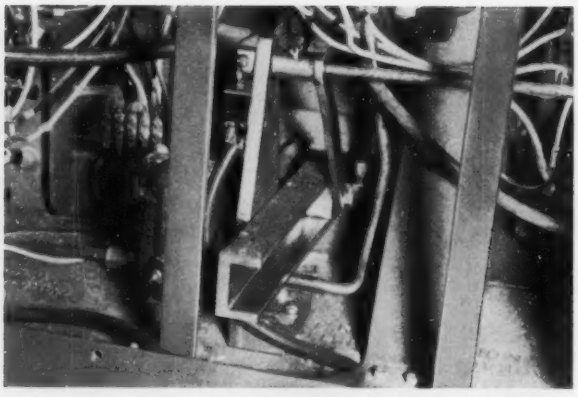


Figure 1. *Cut-away drawing (rear view) shows details of snorkel assembly for gassing of test packages. Flexible tube connected with gas and vacuum sources moves with cam-operated slider which inserts and withdraws the snorkel tube.*



Figures 2, 3. *Photos show snorkel slider in advanced gassing position (above) and withdrawn position (below) for sealing.*

packaging. This step is necessary to reduce or eliminate the residual oxygen entrapped in the powder crystal. It can be done by pulling a vacuum on a 55-gal. drum, or in large operations tote bins can be vacuumized in a chamber, the vacuum then being released with nitrogen. This can be done one or several times, depending upon the oxygen-retention characteristics of the product.

2. *The packaging of the product in the pouch.* When packaging the product on either a hood-enclosed horizontal or vertical-type pouch machine, a positive pressure of nitrogen must be kept under the hood in order to prevent oxygen from entering the hood. Usually the level of oxygen is kept below 0.75% under the hood. Also, it is common practice to flush or purge the product with nitrogen from the base of the filler on through the transport system to the supply hopper itself.

3. *The ability of the packaging material to resist permeability of gases.* Permeability is of two types: solution permeability and permeability through pinholes. When dealing with foils, pinhole permeability is of the greatest importance and, when dealing with synthetic films, solution permeability has the greatest effect; also, it is known that the permeability of most materials is inversely proportional to its thickness (3). It is necessary to determine what combination of materials will provide the necessary level of protection without the risk of overpackaging at consequent higher costs.

Since the above three factors all add to the total cost of the finished product, it is therefore important, to derive the greatest benefit from gas packaging, that each of these factors be developed to maximum effectiveness. The goal of most packagers is to keep the oxygen content in a pouch below 2% until such time as the product is used. The aforementioned procedure should result in a package atmosphere of less than 2% oxygen; therefore, the more effectively factors one and two are carried out, the greater the latitude for permeability tolerance of the pouch material itself. It is here that savings can be realized through the use of a less-expensive packaging material.

Objectives and procedure

Although much work has been done on evaluation of flexible gas- and moisture-barrier materials as such, there have been relatively few published reports of the performance of these materials made up in pouch form and filled with actual product. Since many of these combinations are relatively costly, one of the objectives of this work was to find the least-costly material that would provide the necessary level of protection.

The pouch material specified for initial production of a modified milk powder containing fat was 25-lb. pouch paper/0.001 foil/120-gauge N_2 Pliofilm. This was an interim specification pending the results of the study on variations of film and foil laminations. There are multiple combinations of materials that may be promising; however, this work was limited to specifications currently available. For laminations selected, see Table II.

In order to go about gassing the test pouches, we attempted to find a test method that would provide maximum effectiveness at minimum cost. The first step was to adapt a Sentinel combination impulse and hot-bar sealer (Model 12-12AS) to gas packaging. The Mechanical Development Dept. modified the impulse side of the sealer to include a nitrogen-flushing tube (see Figures 1-6). The pouches were gassed in the following steps:

1. The pouch was filled and sealed across the top with an opening of about ¼ in. left unsealed.

2. The snorkel tube (a ⅛-in aluminum tube with a crimped end and multiple $\frac{1}{32}$-in. holes near the end) is activated from the back of the machine between the sealing jaws by means of a direct lever linkage (see Figures 1-3).

3. The tube is inserted in the pouch through the ¼-in. opening (Figures 4-5).

4. The nitrogen is turned on, flushing the pouch (Figure 5). The operator flushes and evacuates the pouch three times, using his hands as a bellows.

5. The tube is withdrawn by a lever. A microswitch prevents the operator from activating the sealing jaws until the snorkel tube is entirely retracted from beneath the jaws.

6. The pouch is then sealed on the impulse side immediately after withdrawing the gas-flushing tube (the operator presses the foot pedal while retracting the snorkel tube and, by means of the microswitch, the sealing jaws close immediately after the tube is clear of the jaws).

7. As a further precaution to insure a good seal, in the event that some product may have become trapped in the narrow seal made by the impulse sealer on removal of the tube, the pouch is again sealed, this time on the sealer's wider hot-bar side.

It is possible when using this method of gassing to pull a vacuum on the pouch first. However, it has been found that by using pre-gassed milk powder, a level of oxygen between ½% and 0% in the sealed pouch will be reached.

The 4-by-6-in. pouches were formed, filled with 42 gms. of pre-gassed agglomerated non-fat milk and sealed by hand. A four-side-sealed pouch was used to insure that no leaks would occur at the bottom fold. Half of the quantity of each type of pouch was then placed 10 at a time for 1 min. in a revolving kettle with two tinplate baffles to simulate a "handled" condition. The kettle has an inside diameter of 23 in. and revolves at 35 r.p.m. These pouches are henceforth referred to as "handled."

Three pouches of each variation were evaluated at the end of each storage period.

Figure 4. *Photographic view from front of sealer, showing snorkel protruding from between the sealing jaws.*

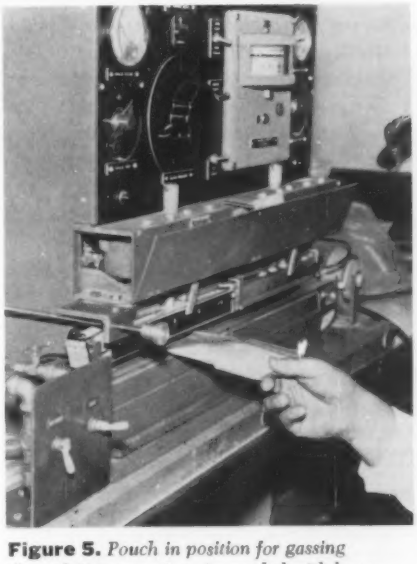


Figure 5. *Pouch in position for gassing through ¼-in. opening. As snorkel withdraws, the final seal is made.*

Results and discussion

1. *Water-vapor transmission* (average of handled and non-handled pouches). Of the 13 laminations, only the Mylar/PE and K202 cello/PE combinations proved to be unsatisfactory. For the milk product involved, a moisture gain of more than 1.50% is considered excessive and therefore is termed unsatisfactory. The Mylar/PE pouches gained 7.35% and the cello/PE pouches gained 5.55% after two months' accelerated storage (which is considered equivalent to one year under normal storage conditions). The other 11 combinations showed negligible moisture gain (less than 1%).

2. *Oxygen transmission.* Because of the nature of the product, 2% is the maximum allowable amount of oxygen that can be tolerated in the pouch atmosphere because of the danger of oxidation occurring above this level. Non-fat powder was used in this

Table 1: Storage data and test methods

Storage condition	*Length of storage (months)*	*Analytical tests*
Accelerated[1]	1 and 2	% H_2O[3]
Room temperature	2, 4 and 6	% H_2O
Cycled[2]	2, 4 and 6	% O_2[4]
Cycled	2, 4 and 6	% H_2O

[1]90% R.H., 100 deg. F.
[2]12 hrs.-85% R.H.-70 deg. F., 12 hrs.-45% R.H.-95 deg. F. It is thought that this condition, because of differential pressures exerted on the materials, is closer to "normal" storage conditions and, therefore, is the best test of a gassed pouch.
[3]1-hr. toluene distillation.
[4]Beckman oxygen analyzer.

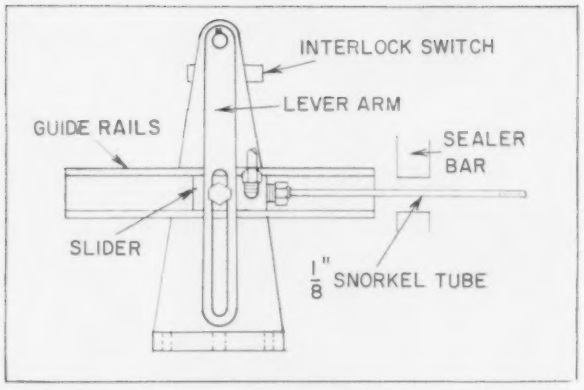


Figure 6. *Details of snorkel assembly in side-view drawing.*

test, but gassing and hence gas-barrier materials are necessary for powders containing fat.

Based on cycled storage tests as shown, the test laminations were classified as appear in Table II.

In classifying the laminations, all the available data were averaged together (18 pouches of each lamination) to determine the range.

Leakers occurred both in excellent barrier materials such as 0.001-in. foil laminations, as well as in less-effective materials. This is not due to poor or ineffective material, but rather to the sharp edges of the baffles which were used in the revolving kettle. Wherever a lamination contained an obvious fracture due to handling, the figures were disregarded and were not entered in the figure for the average of the three pouches.

It is also important to note the difference between the methods of packaging pouches for shipment. Data are available to show that a pouch shipped on end gets a great deal more handling than a pouch that is shipped flat. This "handling" causes multiple fractures in the foil which break down any oxygen barrier. This should be considered when selecting any gas-packaging material. The more severe the handling to which the pouch is subjected, the greater protection required in the barrier material.

Conclusions

The results indicate the validity of reducing foil thickness to as low as 0.00035 in.; however, when using this thickness, it is important that a plastic such as Pliofilm or heavy-gauge polyethylene, 2 mils or thicker, be used to provide additional barrier qualities as well as to add mechanical strength to the material. Gas packaging in lighter materials, utilizing 0.00035 foil, has greatly increased since the beginning of this work. It is now common practice in the dehydrated-potato field to use a 0.00035 foil with 30 lbs. of polyethylene; this level of protection apparently meets their specific atmosphere requirement. However, before packaging in one of these less-expensive laminations, a thorough shipping-test program should be initiated. It is only through shipping and handling channels that the final effectiveness of the material can be evaluated because, in this manner, the package is subjected to stresses which cannot be practically duplicated in any laboratory test procedure.

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2. Milleville, H. P., "Quality Preserved," *Food Processing, 17*, 11 (1956).

3. Charlton, F. S., and DeLong, R. F. "Foods and Permeability," MODERN PACKAGING, *29* (7), 227 (March, 1956).

Table II: Results of gas-transmission storage tests

Material	*% O_2 (three samples each column)* — *Unhandled* 2 mo.	*Unhandled* 4 mo.	*Unhandled* 6 mo.	*Handled* 2 mo.	*Handled* 4 mo.	*Handled* 6 mo.	*Average of all pouches*
% O_2 range, 0-1.0							
25# pouch paper/0.001 foil/120 N_2 Pliofilm	0.80	0.84	0.91	0.80	0.75	0.97	0.84
25# pouch paper/0.001 foil/80 N_2 Pliofilm	0.85	0.93	0.90	1.00	0.65	0.89	0.87
% O_2 range 1.1-2.0							
32# pouch paper/0.00035 foil/120 N_2 Pliofilm	1.20	1.02	1.28	0.90	1.46	1.35	1.20
32# pouch paper/0.0007 foil/120 N_2 Pliofilm	0.88	0.93	0.95	1.10	1.77	1.90	1.26
35# pouch paper/0.0005 foil/120 N_2 Pliofilm	1.10	1.60	1.49	1.00	1.21	1.72	1.35
88-gauge acetate/0.0007 foil/120 N_2 Pliofilm	1.00	2.28	1.50	1.40	1.02	1.00	1.37
25# pouch paper/0.0007 foil/80 N_2 Pliofilm	1.30	1.49	1.35	1.90	1.35	1.20	1.43
25# pouch paper/0.00035 foil/80 N_2 Pliofilm	1.30	1.58	1.72	0.90	1.33	1.95	1.46
25# pouch paper/10# PE/0.00035 foil/0.002 PE	1.60	1.77	1.90	1.60	1.19	2.00	1.68
% O_2 range, 2.1-15.0							
25# pouch paper/0.00035 foil/0.001 PE	1.90	4.28	3.90	2.60	1.12	7.00	3.47
450-gauge K202 cellophane/0.0015 PE	2.70	7.44	5.60	2.80	14.70	12.00	7.54
50-gauge Mylar/0.0015 PE	13.80	11.55	19.30	15.20	11.95	11.70	13.92
% O_2 range, 15.0-20.8							
50-gauge Mylar/0.00035 foil/3.2# vinyl*	20.80	20.80	20.80	20.80	20.80	20.80	20.80

*This material performed satisfactorily as a moisture barrier, but was not an oxygen barrier due to the fact that the vinyl did not adequately seal the pinholes in the 0.00035 foil.

CAMPCO

Plastic Sheet and Film

some practical IDEAS for its use in PACKAGING

Design with CAMPCO

Leonard Seeley, designer for Plastofilm, Inc., tells how Campco Butyrate lures fishermen for Four Seasons

Packaging a line of products containing more than forty items can be a problem, particularly when they vary all the way from fish hooks to rods and reels. The situation called for packaging that would be protective and would, at the same time, provide maximum display. And a distinct "family" resemblance had to be maintained throughout the group.

"The entire idea was developed in close cooperation with the principals of Four Seasons, Inc.," said Mr. Seeley. "The rack itself was designed for use in stores having heavy traffic but not having a fishing accessories department. Consequently, it had to be a display that would attract, stop and sell the passerby."

The forty packaged items, which encompass the total needs of the fresh water fisherman, are bubble-packaged in transparent Campco B-120 cellulose acetate butyrate. According to Mr. Seeley, "Examination of various display techniques practical for this varied merchandise showed bubble packaging to be the most versatile, offering worthwhile economy together with fine quality. Furthermore, this one material, Campco B-120 Butyrate, was found admirably suited to all the packages regardless of their size or shape. This, again, resulted in important production economies."

Heat sealed to printed cards, the bubbles add such sparkle and lustre to the merchandise that a recent jury of variety store industries awarded the Four Seasons display their Silver Award for outstanding packaging.

Plastofilm, Inc. designed, developed and manufactured these butyrate bubbles which have contributed so much toward the remarkable success of the Four Seasons display rack.

Campco sheet is used for both the toy and the package

Toy packaging, more often than not, means blister packaging. But there are exceptions like this handsome new puzzle game, "ORBIT", manufactured by Amos-Burke Plastics, Inc., of Syracuse, New York.

The base of the game is made of Campco extra high impact styrene, vacuum formed on a male mold. This tough, rugged material was selected for its ability to withstand the wear and tear of rough handling, as well as for its smooth, attractive finish so pleasant to the touch.

When the game is on display, it seems at first glance, that the marbles are almost popping out at the young buyer. The illusion is maintained by the clear sheet of Campco butyrate which is so closely formed over the marbles and the base as to be practically invisible, yet adding a sparkle and brilliance that is most attractive. This, of course, holds the marbles tightly in place and affords complete protection for the game whether on display or in storage. The complete package includes a die-cut card together with complete instructions for playing the game.

Your CAMPCO representative has some interesting and worthwhile information on the use of plastic sheet and film.

SEE HIM SOON

For the name and address of the one nearest you, see Thomas Register or Conover-Mast Purchasing Directory.

Received Your Campco Personal File? This data-packed reference file on thermo-plastic sheet and film is yours on request—just send name and address on your company letterhead to Campco, 2717-A Normandy Avenue, Chicago 35, Illinois.

CAMPCO Sheet and Film, **a Division of Chicago Molded Products Corp.**

Questions & Answers

This consultation service on technical and engineering packaging subjects is at your command. Simply address your questions to Technical Dept., Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Maintaining strong seals

Q: *One of our packages consists of a porous paper which has been coated with a heat-sealing resin and formed into a large pouch. We are continually experiencing difficulties with the seals that we make to close the top of this package. We are using a jaw-type sealer with heat controls which can make strong seals, but which occasionally makes seals that are extremely weak even though they have had sufficient application of heat. Can you tell us what causes this problem?*

A: The combination of a soft, porous paper and certain easily sealable resins may require a special sealing technique to assure uniform production of strong seals. Your problem comes from the fact that the resin you are using appears to have a limited sealing range and your heat sealer is not holding the jaw temperature within this sealing range. When the jaw temperature becomes too high, the resin is forced into the paper and the seal's strength is greatly reduced.

A possible answer is to use lower jaw pressures so that the fused resin is not forced into the paper. A better answer would be to use a more sentitive thermostat so that the jaw temperatures are controlled at a temperature which allows fusion of the resin, but which is sufficiently low to prevent the resin from flowing into the paper.

Laminated vs. duplex pouch

Q: *Can you indicate a few of the advantages of using a laminated or coated material in place of two separate plies? We pack dry powders in a packaging machine that forms and fills from roll stock. At present we are using polyethylene film with printed white paper as an outer ply. This makes an economical and satisfactory flat bag, but we are considering a new package using a polyethylene-coated paper to be used on the same machine. Do you recommend such a change?*

A: There will be no difference in the protective qualities of either the single ply or the duplex construction providing you use sufficient polyethylene on the coated paper.

However, the single-ply package will be easier to tear open and will give a cleaner pouring opening. Also, the single-ply sheet should simplify the machine operation and perhaps make possible higher operating speed. The increased thickness of the coated or laminated paper will give a flatter and stiffer package—an advantage in shelf appearance.

Uniform heat sealing

Q: *We make large-sized, flat, four-side-sealed pouches from polyethylene-coated cellophane. The coating is 1 mil of extrusion-coated resin on 300-gauge cellophane. From time to time we have had trouble in getting this material to heat seal uniformly across the rolls. One side seals well, while the other side does not. How can we specify that this material is to be made to insure uniformity of heat sealing?*

A: In the extrusion coating of cellophane with polyethylene, it is necessary to use greater care than is required for coating paper and also to maintain certain operating conditions. The problem is to oxidize the resin slightly in order to improve its adhesion to the cellophane. This step requires careful control and uniformity of temperature at the extrusion die. If the resin is overheated or excessively oxidized, it does not heat seal at the normal temperatures, times or pressures. Apparently the material that gave you poor sealing had one side that was overheated. In a long seal, this would mean that at a given temperature you could only get good sealing on one side or the other. One of the dangers of oxidized polyethylene is that, upon aging, the resin becomes more difficult to heat seal. Overheated resin is also a possible source of off-odors.

It is suggested that you tell your supplier to set up a quality-control test to measure the degree of oxidation of the resin. There are several rapid tests for oxidation and they will quickly show if the resin is uniform across the web and will also measure the level of oxidation. Such tests are the only way to assure uniform-quality extrusion coating.

Improved label adhesion

Q: *We use a small label applied to a varnished, printed carton. The label we are using is a 40-lb. supercalendered, printed paper which is also varnished. The adhesive is a dextrine type and is applied by a special labeling machine. Very often the labels wrinkle badly or lift off at the edges. How can we improve the label appearance and its adhesion to the carton?*

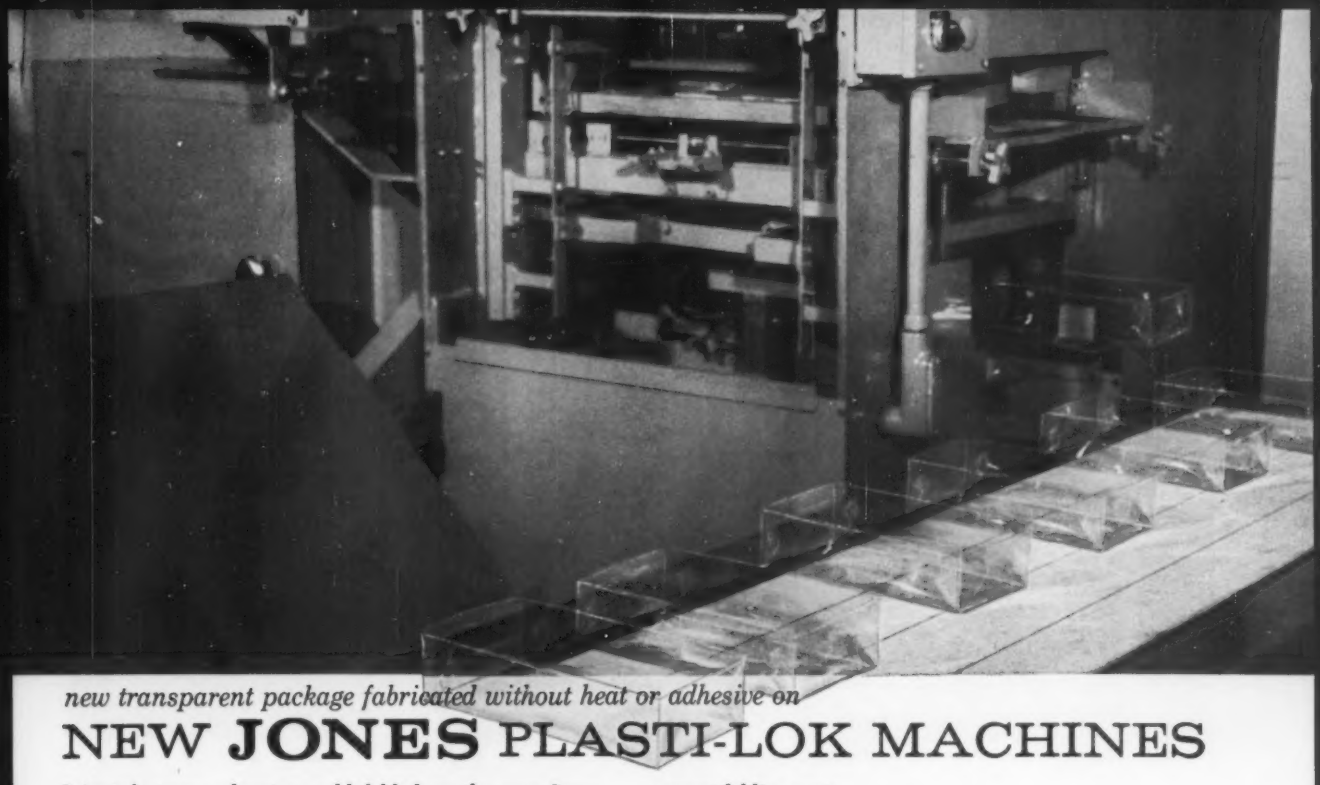
A: It would appear that the wrinkling and edge lifting of your labels is due to the application of too much adhesive and the use of a thin and dense label paper.

When the applicator applies an excessive amount of adhesive, the extra water is trapped between the two varnished surfaces. This extra moisture does not allow the adhesive to develop its full strength and, at the same time, causes the label to wrinkle and tend to curl. If you use a heavier label paper with less density, the paper would be less critical to variations in the amount of adhesive used.

In any case, the amount of adhesive should be controlled to the minimum necessary to get good label bonding when the carton leaves the compression unit. Heavier paper, plus control of adhesive application, should give flat, uniformly bonded labels.

Plasti-Lok

rigid, transparent plastic packaging



new transparent package fabricated without heat or adhesive on

NEW **JONES** PLASTI-LOK MACHINES

Oriented styrene sheeting, cold folded on the new Jones Plasti-Lok machines, introduces the first high speed production method for forming a rigid, transparent tray.

The Jones Plasti-Lok machines are made in two models with overlapping size ranges comparable to those normally covered by conventional paper board tray forming machines. Trays are set up at the rate of 40 to 100 per minute depending on tray size and dimensional relationships. Size changeover made in 20 minutes or less (depending on ability of mechanical personnel) by easy replacement of pre-set folding parts.

Producers of meats, fresh vegetables, baked goods, candies, textiles, drugs and hard goods can put their products into the new, low cost transparent package now . . . by purchasing* the new Jones Plasti-Lok machines. The application of Jones rugged design and construction standards, plus the predictable uniformity of the plastic material, bring a new concept of dependability and trouble-free operation to tray type machines. R. A. Jones & Company, Inc., P.O. Box 485, Cincinnati 1, Ohio.

Blank Handling • *Positive, superior method of blank feeding.* • *Accurate positioning and registration of blank.* • *Positive closing of locks forces male portion into position.* • *Vacuum stripping of completed tray from forming head.* • *Side and end folds made in two stations for shorter machine strokes and higher speeds.*

*Leasing and other financial arrangements available directly from R. A. Jones & Co.

Patent Application *Information gladly furnished on the development of and patent applications for Plasti-Lok and the plastic cold folding principle.*

See YOUR Product **in Plasti-Lok FREE.** Send us (carefully packed) a sample of your product and carton. We'll package it in Plasti-Lok and return it to you promptly, without cost or obligation.

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For any possible packaging assistance, phone or write: Fibreboard Paper Products Corporation, 475 Brannan Street, San Francisco, California.

* 200 per minute

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FOR METAL CLOSURES
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Represented in major cities throughout the United States.

Plants & People

Karl R. Bendetsen has been elected pres. of **The Champion Paper & Fibre Co.**, Hamilton, O., following the recent death of **Reuben B. Robertson, Jr.** (see "Obituaries," p. 150). **Dwight J. Thomson** has been named chairman of the board, succeeding **Reuben B. Robertson, Sr.**, who becomes honorary chairman. Mr. Bendetsen formerly was exec. v.p. of Champion's operations group. Mr. Thomson was named exec. v.p. of the converting-products group last year.

Bendetsen *Thomson*

Paul R. Fechheimer has been elected pres. of **The Karl Kiefer Machine Co.**, Cincinnati. **James A. Rheinstrom**, chief exec. for the last 29 years, moves up to chairman of the board. **Harry C. Goeltz** becomes v.p. and **Philip V. V. Hurlbut** is sales manager.

Arnold A. Butterworth has been promoted to sales mgr. of the plastics dept. of **The Dow Chemical Co.**, Midland, Mich. He succeeds **G. J. Williams**, who becomes asst. gen. sales manager.

General Chemical Div. of **Allied Chemical Corp.**, New York, reports new developments aimed at strengthening its position in the field of fluorine chemicals. The div. is expanding by 50% the capacity of its anhydrous hydrofluoric acid facility at Nitro, W. Va. In addition, a plant will be built at Baton Rouge, La., to manufacture a new group of fluorocarbon plastics.

A. M. Browne becomes sales development mgr. for the food industry in **Armstrong Cork Co.'s Packaging Materials Div. B. M. Humphries**, asst. mgr. of glass-container sales administration, has been assigned additional duties as asst. sales development mgr. for the beer and beverage industries.

Metal Edge Industries, Barrington, N. J., has acquired the **Universal Container Co.** of San Francisco. The new acquisition, to be known as **Metal Edge Universal**, will continue to function under the present management, with **Albert DeNola** as pres. and **Alfredo DeNola** as vice president.

Clifton C. Sutton has been appointed mgr. of packaging development for **The Quaker Oats Co.**, Chicago. He will headquarter at the company's research laboratories in Barrington, Ill. Before joining Quaker, Mr. Sutton was with **General Foods** for 17 years, most recently as packaging-laboratory director. He is a member of the **Packaging Institute, Technical Assn. of the Pulp & Paper Industry** and the **Institute of Food Technologists.**

Louis F. Weyand has been elected vice chairman of the executive committee of **Minnesota Mining & Mfg. Co.**, St. Paul. **J. F. Whitcomb** becomes divisional v.p. in charge of the coated abrasives and related products division.

Key Polymer Corp. is the name of a new company formed to develop and produce adhesives and coatings from epoxy and polyurethane polymers. The company is located at 135 Bradford St., Lawrence, Mass. Its officers are **Jacob Lichman, Sydney Comins** and **Adrian Comins.**

Manypenny

Gerry O. Manypenny has joined the business staff of MODERN PACKAGING. Mr. Manypenny is widely known in the packaging field, where he has spent 21 years, 15 of these in editorial and sales work on various publications. His first job was with a major materials supplier.

A Packaging Development Laboratory has been created by **Aluminum Co. of America.** Manager of the new operation is **Ross C. Reed.** The new laboratory has been organized to develop and perfect new production processes for aluminum packaging, says the company. It is designed to carry to the point of practical application the various developments of the foil and packaging div. of Alcoa Research Laboratories.

Lawrence G. Brown has been appointed to the newly created post of director of research and development for **Union Bag-Camp Paper Corp.**, New York. He was formerly associated with **Nashua Corp.** and the **Scott Paper Co.** in research and development capacities.

AviSun Corp., Philadelphia, is planning construction of a 100-million-pound-per-year polypropylene plant to be located in the Eastern U.S. The company's production facilities at Port Reading, N. J., leased from Koppers Co., are being expanded to 25 million pounds-per-year capacity.

Celanese Corp. of America, New York, is establishing a new plastics-development laboratory in Clark Township, N. J. The new installation will provide a central facility for market-oriented exploration of both established and new plastics, including high-density polyethylene. Operations of the laboratory will include evaluation and product application of new plastics, technical service to Celanese plastic customers, and new process development and pilot plant activities.

W. G. Genne' has been appointed v.p. and asst. gen. mgr. of the **Dixie Cup Div., American Can Co.**, Easton, Pa. **J. L. Coldren** has been named v.p. in charge of sales for the division.

Chippewa Plastics Co., div. Rexall Drug & Chemical Co., Chippewa Falls, Wis., has begun production of polypropylene film. Present production is limited to translucent blown tubing for special industrial application. The company also has established a Chicago sales office at 5111 Sheridan Rd., N. **George N. Keyser** is in charge.

Jonas C. Jorgensen, one of the first salesmen to introduce cellophane for packaging, has retired from **The Dobeckmun Co.**, Cleveland, div. **The Dow Chemical Co.** Mr. Jorgensen had been district New York sales mgr. for Dobeckmun since 1945. Previously, he had been employed by **E. I. du Pont de Nemours.** He was one of three salesmen named by Du Pont to handle cellophane when it was first placed on the market in 1924.

Arthur Snapper, pres. of **Milprint, Inc.**, Milwaukee, also has been named chief exec. officer, succeeding board chairman **Roland N. Ewens.** Mr. Ewens, resigned, will continue as a consultant to the company. **David M. Little** has been appointed director of engineering, a newly created post.

Charles G. Ellington has been named pres. of **Mid-West-Pak Corp.**, Belvidere, Ill., sub. **The Champion Paper & Fibre Co.** He succeeds **J. Bruce Morford**, retired. **Stanley Sackett** has been appointed v.p. and gen. mgr. for Mid-West-Pak. The company produces bottle closures, paper containers and related items.

A reorganization of management positions in the Metal Div. has been announced by **Continental Can Co.**, New York. **Robert S. Hatfield** is now asst. gen. mgr. of the div., a new position. **Robert D. Heaviside** takes over Mr. Hatfield's former duties as gen. mgr. of metal-can sales. **Lauren C. Dudley** succeeds Mr. Heaviside as gen. mgr. of the Northeastern district. Mr. Dudley's former responsibilities as gen. mgr.

Hatfield *Heaviside*

CASE HISTORY

of the now famous P. Lorillard combination package
...HOW A GOOD PACKAGE WAS MADE BETTER!

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ORIGINAL PACKAGE design by Plaxall. Two-piece construction featured pressure formed clear acetate SLIDEPLAX with tracks on the back, and separate styrene platform to hold lighter... Package proved an immediate merchandising success.

Step No. 2
PACKAGE IMPROVEMENT by Plaxall. Rounded corners improved over-all appearance of the package and cut-back tracks permitted easier, labor-saving insertion of the cardboard backing.

Step No. 3
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SLIDEPLAX unit revised so as to eliminate the separate platform... yet cigarettes and lighter are held securely in single piece pressure formed construction... a further saving in loading time and production cost.

This policy of package improvement is fundamental with Plaxall. The P. Lorillard Company package is just one of many, wherein the continuous application of Plaxall engineering, design skills and high speed production facilities have resulted in better plastic formings at lower cost.

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Plants & People [*Cont'd*]

of the div.'s Southeastern district have been assumed by **D. B. Wiesley.**

Charles K. Brett has been appointed mgr. of market development for folding cartons in the Boxboard & Folding Carton Div. **Dr. James F. Miller** has been named laboratory director of gen. chemistry at Concan's Central Research & Engineering Div. in Chicago.

Robert H. Adam has been appointed national account sales mgr. for corrugated container operations in the Packaging Div. of **Olin Mathieson Chemical Corp.,** New York. He will locate in Chicago.

Fibreboard Paper Products Corp., San Francisco, has formed a new manufacturing and merchandising unit, the **Tube & Can Div. William Ecker** has been named gen. mgr. of the division.

The Plastics Div. of **Spencer Chemical Co.,** Kansas City, Mo., has named two new market mgrs. **LeRoy Doar** assumes the post of market mgr. for films and coatings. **Robert Osborne** becomes market mgr. for molding.

Doble

Kendall J. Doble, Jr., has been elected pres. of **Pneumatic Scale Corp., Ltd.,** Quincy, Mass. He succeeds his father, who died suddenly while on a recent business trip to England. A grandson of the late William H. Doble, who founded the company in 1895, Mr. Doble was elected a v.p. and director in 1955. A year later, he assumed the responsibilities of exec. v.p. of the machinery-manufacturing firm.

William T. Rich has assumed the responsibilities of advtg. mgr. in addition to his duties as sales-promotion mgr. for **Oxford Paper Co.,** New York. He takes over from **Joseph H. Magruder,** who has resigned to join Seaman & Co., management consultant.

Harry F. Loehrke has been promoted to mgr. of special projects in the general research dept. of **Owens-Illinois Glass Co.,** Toledo. He is now responsible for research and development of materials composed partially of glass and crystalline substances and also is in charge of O-I's dielectric laboratory. **Robert E. Martin,** associate professor of chemistry at the University of Toledo, has joined the staff of O-I's general research dept. He will concentrate on developing new polymers with greater heat stability and chemical resistance. **Kenneth M. Henry,** the company's first associate director of research, has retired after more than 40 years' service.

Robert D. James has been appointed v.p. and gen. sales mgr. of **Consolidated Paper Co.,** Monroe, Mich. He was formerly with **American Box Board Co.** (now part of the combined Packaging Corp. of America). **Kramer E. Verhoeven** is now v.p. in charge of sales for the company's North Side Mills and Corrugated Division.

Lewis A. Dibble, Jr., has been elected exec. v.p. of **The Risdon Mfg. Co.,** Naugatuck, Conn., mfr. of aerosol valves and containers. **Russell R. Ayres, Jr.,** becomes gen. sales coordinator, and **John K. Quinn** is asst. sales mgr. of the company's cosmetic and aerosol divs. Elected to the post of v.p. are **Lawrence F. Heileman, Edward Noyack** and **Donald S. Tuttle, Jr.** Mr. Tuttle and **Malcolm Baldridge** become directors of the company. **Earl F. Copp,** a v.p. of Risdon since 1935, has retired, but will continue as a special consultant to the firm.

Dibble *Ayres*

A new company, **Alliance Paper & Packaging Co.,** has been formed for the production of coarse paper and packaging products. **Hal G. Ross,** pres., **Roy R. Ganz,** secy., and **Lewis E. Bender,** treas., are founding members of the company, which is located on Lakeville Rd. at Hillside Ave., New Hyde Park, N. Y. **David R. Coplan** and **Sidney J. Zalkind** also have joined the new organization.

Thomas W. Morningstar has been elected exec. v.p. of **Morningstar-Paisley, Inc.,** New York. He had been serving as v.p. and gen. mgr. of the Gum and Technical Products Dept. since last year. He will retain these duties in addition to his current appointment. **David Bookshester** has been appointed sales mgr. for the Adhesives Div. **Iven G. Nichol** is now sales mgr. for national accounts.

Richard S. Aldrich is newly appointed mgr. of mktg. services for the **Hinde & Dauch Div.** of **West Virginia Pulp & Paper Co.,** Sandusky, O. He will be responsible for advertising and public relations, market research, sales training and art service for the div. He succeeds **William F. Westerhold,** resigned.

A new company, **Vulcan-Associated Container Companies, Inc.,** has been formed following the merger of seven associated container manufacturers. With **Gordon D. Zuck** as pres., the new organization will have its headquarters at Birmingham, Ala. The firms which have consolidated to form the new organization are: Vulcan Containers, Inc.; Vulcan Steel Container Co.; Southwestern Steel Container Co.; Vulcan Containers, Ltd., Toronto; Vulcan Containers, Ltd., Vancouver; Vulcan Containers Pacific, Inc., and At-

Zuck *McCarthy*

Rhinelander Glassine Greaseproof Tailor-made Papers...

Packaging with Glassine and Greaseproof papers means a "you name it" versatility that you just can't match with other packaging materials. You start with basic greaseproofness . . . odor resistance . . . high tensile strength . . . smooth finish . . . excellent printing surface . . . transparency or opacity, and a variety of weights and colors. Then, as required, you can add many extra qualities such as wet-strength, moisture vapor resistance, gloss, heat-seal and release properties through coating, waxing, or laminated combinations. Best of all, you are working with the inherent economy and beauty of paper . . . the finest of all packaging materials. Let us discuss with you a Glassine or Greaseproof paper tailored to *your* requirements. Write for information, stating application.

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- Candy and Cookie Cups
- Retail Food Service Wrap
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when your package must

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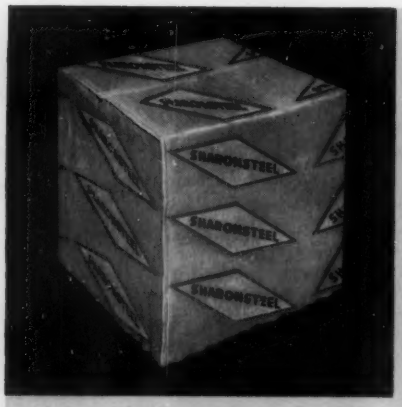
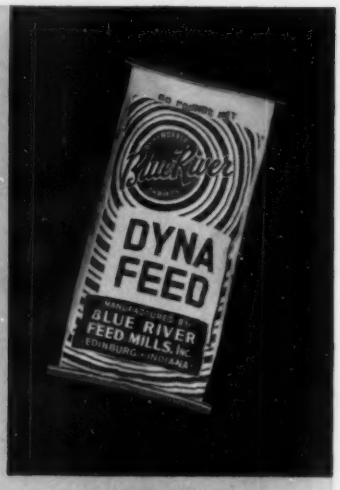
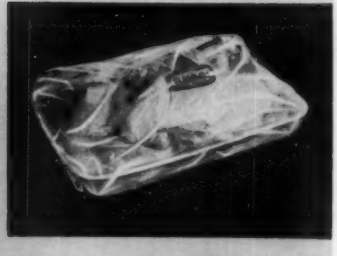


Protective coverings for storage and shipment are dependable when made of Kennedy krinkle kraft.



Colorful multiwall bags easily identify and sell stock feeds and fertilizers.

Zip-Lip "see through" poly bags sell soft goods in "factory fresh" condition.



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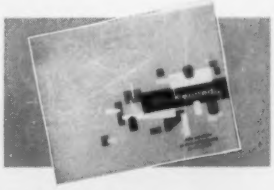

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Plants & People [*Cont'd*]

lantic-Vulcan Steel Containers, Inc. These concerns make steel pails and drums, tin cans and printing inks, among a number of other packaging-field commodities. **Vern I. McCarthy, Sr.**, will serve as chairman of the board of the new company. **Fred A. Kusta** is exec. vice president.

Grant

Douglas C. Grant is the newly appointed director of advtg. and public relations for **United States Printing & Lithograph Div., Diamond National Corp.** Mr. Grant will maintain offices in Cincinnati. He will be responsible for all advertising, public relations and sales-promotion activities. He has been with the organization since 1958.

Following the creation of its Plastic Bottle & Tube Div., **Continental Can Co.**, New York, is setting up plastic-bottle production facilities in Los Angeles, Baltimore and Cincinnati, supplementing present production at its Chicago plant. New lines will make custom-molded bottles up to 32-oz. size.

McDougal

Murray McDougal has been named pres. of the newly formed California corporation, **Presto Adhesive Paper Co. James Rieger**, pres. of the Presto Adhesive Paper Co. of Ohio, is v.p. and director of the new firm. Plant and executive offices are located at 1245 Flower St., Glendale, Calif. Presto Adhesive Paper is producing pressure-sensitive adhesive paper stocks for the graphic-arts field. Mr. McDougal formerly was pres. of **Archer Label Co.**

E. F. Collins has been appointed gen. mgr. of the **W. C. Ritchie Div.** of **Stone Container Corp.**, Chicago. For the past three years, Mr. Collins has been v.p. of mktg. of **Metal Edge Industries.** He succeeds **Leo Warmuth**, resigned.

Eckerstrom

Following the recent resignation of **J. Sanford Doughty, Ralph E. Eckerstrom** has been appointed director of advtg. and public relations for **Container Corp. of America**, Chicago. Mr. Eckerstrom, who joined the organization in 1956, had been director of the dept. of design since 1957. Mr. Doughty had held the post of advtg. mgr. since 1948.

At a recent meeting of the officers of **J. F. Auer, Inc.**, paper converter, Mamaroneck, N. Y., **Joseph S. Cameron** was elected v.p. of **A. L. A. Industries**, Harrison, N. Y., an associate company which fabricates hardboard containers. **Merlin L. Jackson**, pres., and **Philip Merlin**, v.p. of **A. L. A. In-**

Post Toasties packages in three sizes get added eye and sales appeal—from cylinders produced by Intaglio craftsmanship.

Identical triplets —from Intaglio cylinders!

Post Toasties, one of America's best-known cereals, is packaged in 8 oz., 12 oz., and 18 oz. cartons...gets uniformity in all three package sizes by printing in gravure from Intaglio cylinders.

Intaglio uses the same art for the different package sizes, produces the sets of cylinders for the three sizes, and shows advance proofs for the printer's guidance. All the packages are printed on paper laminated to board, and die cut. The result is identical triplets, uniform appearance in all three sizes.

Whether you package your products in paper, board, foil, vinyl, cellophane or other materials, get the best in gravure reproduction from Intaglio plates. And gravure cylinders have a longer process life, give more impressions, than the ordinary letterpress electros.

WITH more than twenty years of gravure experience, Intaglio produces more fine packages, labels, and wrappers than anyone in the business and produces them better—helps some of the fastest selling brands sell faster.

A staff of 500 skilled personnel (35% with us ten years or longer)...five entirely new plants in the past five years... and plant locations in New York, Cincinnati, Chicago, Detroit and Boston make Intaglio best—for the best in gravure packaging.

Our eight offices are at your service.

Intaglio SERVICE CORP

Intaglio Service CORPORATION

America's First Gravure Servicers

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The shape of good things to come...

America's leading distillers shape their products in Thatcher containers because they know they can expect only the finest quality and service from Thatcher. Thatcher's unmatched quality control is a standard of excellence and purity wherever fine glass containers are used. No matter how large or small the job, Thatcher customer service insures satisfaction.

GOOD THINGS COME IN

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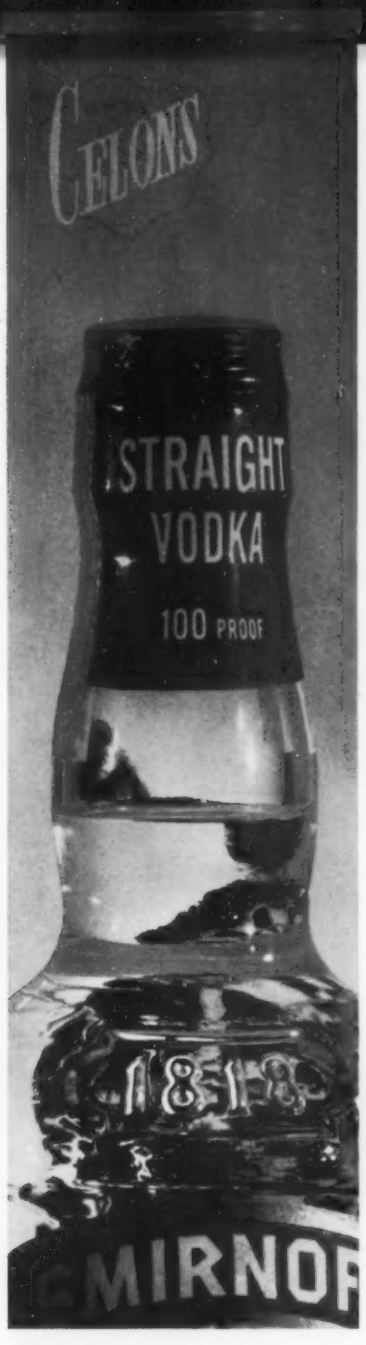

The seal...

America's leading distillers also protect their products with Celon, the attractive seal that safeguards quality, prevents spillage, and assures delivery of the authentic product.

Thatcher

Plants & People [*Cont'd*]

dustries, were elected v.ps. and directors of the parent company.

Andora Automation, Inc., 1613 East New York Ave., Brooklyn, is a new firm offering a line of assembly, packaging and special-purpose machinery for the drug, chemical and cosmetic industries. **Lawrence A. Fischer** is founder and president.

Howard Dean has been promoted to asst. gen. supt. of the **Kalamazoo Paper Box Corp.**, Kalamazoo, Mich. He will also serve as gen. mgr. of the company's Folding Box Division.

Edward J. Arrott has been elected v.p. of mfg. for **American Bag & Paper Corp.**, Philadelphia.

The Mead Corp., Dayton, O., has expanded its **Mead Containers Div.** and has appointed new officers within the div. **William W. Wommack** becomes gen. administrative mgr. **Joseph G. Donohoo** moves up to the post of gen.

Wommack *Donohoo* *Renshaw*

sales mgr. and **Fred T. Renshaw** is director of mktg. services. New asst. gen. sales mgr. is **William F. Connor.** As part of the divisional expansion, four new regional offices have been created. The new offices, and their mgrs., are: Southern (Memphis), **Virgil C. Shutze**; Midwest (Toledo), **William H. White**; Central (Cincinnati), **Lawrence A. Sicking**; Northeast (North Bergen, N.J.), **William H. Greenberg.**

Extrudo-Film Corp., Long Island City, N. Y., has acquired **Alfred Charles & Co.**, Milford, Conn., extruder of cast polyethylene and polypropylene films. The equipment is being relocated in Extrudo-Film's Pottsville, Pa., plant. **Charles Strange**, pres. of Alfred Charles Co., has joined Extrudo-Film Corp. He will be in charge of research and development.

John Price becomes foil product mgr. of **Aluminum Foils, Inc.**, Jackson, Tenn. Mr. Price has been Eastern sales mgr. In his new capacity, he will work out of the New York office.

American Seal-Kap Corp., New York, has appointed **David W. Wallace** exec. v.p. of the company, manufacturer of packaging materials and equipment.

R. Chester Reed has retired as supervisor of packages and shipping for **Texaco, Inc.**, and is living in Lake Worth, Fla. Mr. Reed is known to many in the packaging field as former director and v.p. of the **Packaging Institute**, past pres. of the New York Div. of the **Society of Packaging & Handling Engineers**, and a former member of the Package Planning Council of the **American Management Assn.** During 1956, he served—on loan from Texaco—as Deputy Director of the **Containers & Packaging Div.** of the **Business & Defense Services Administration** in Washington.

Ekco-Alcoa Containers Inc., Wheeling, Ill., has formed a Merchants Advisory and Marketing Committee. The purpose of the committee will be to seek solutions to problems of the company and its distributors. In addition, it will formulate and execute a program for efficient distribution of Ekco-Alcoa's products, according to the company.

After 33 years of service, **Floyd W. Jefferson** has retired from the board of directors of **Package Machinery Co.**, East Longmeadow, Mass. Mr. Jefferson is 82 years old. Newly elected directors include **Kenneth B. Hollidge**, exec. v.p. of **Arthur Colton Co.**, and **E. Archer Turner**, exec. v.p. of **Baker Perkins, Inc.**, Saginaw, Mich.

Joseph W. Scott has been appointed gen. mgr. and treas. of **Transpak, Inc.**, Hialeah, Fla. Transpak color prints and converts flexible packaging materials.

Donald E. Bartelt has retired as exec. v.p. of **Bartelt Engineering Co.**, Rockford, Ill. Mr. Bartelt was a co-founder (with his brother, Harold Bartelt) of the packaging-machinery manufacturing company in 1942.

The **Rap-In-Wax Company** is the new name of the former Rap-In-Wax Paper Co., Minneapolis. According to the company, the change of title became necessary because of expansion and diversification of its operations.

Howard J. Geraghty has been named asst. to the group v.p. in charge of converting and packaging operations at **Standard Packaging Corp.**, New York. He will locate in the St. Louis office for consultation on foil and coil-sheet problems. **Ralph E. Herzler, Jr.**, has been appointed mgr. of the **Johnston Foil Div. Edwin E. Nelson** has been assigned to the post of sales mgr. for the div. **A. B. Christine** is now regional mgr. for the div.'s Midwest sales.

The Jeanette Glass Co., Jeanette, Pa., has begun an expansion program, to include acquisition of additional manufacturing facilities. The company recently increased its glass-container manufacturing facilities and reports a 40% increase in sales volume. **Maurice L. Stonehill** is new chairman of the board. **Burt Todd** is pres. and **Donald J. Master** is in charge of sales.

Neatway Products, Inc., plastics fabricator, Minneapolis, has begun a $1,000,000 relocation and expansion program. The company is moving to a new site, with double its present plant space, at 1010 Lyndale Ave., N. New machinery and handling facilities are being installed. The company reports that ex-

[*Continued on page 146*]

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Other STANDARD Comet Machines: LAB-VAC, Three Station ROTARY, COMET "TWIN", "STAR" Thermo Forming Press, "MERCURY" Continuous Vacuum Forming and Packaging Machine, Automatic Skin-Pak and slitting unit.

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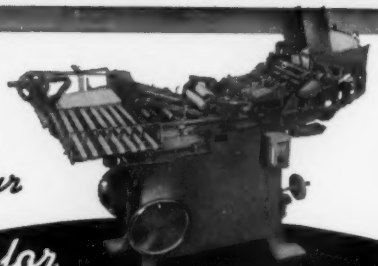
PROGRESS IN PLASTICS



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Plants & People

[*Continued from page 143*]

pansion is being made to keep pace with the increasing demand for plastic containers in the food field.

The Paper Mate Co., Chicago, has announced the appointment of **Robert R. Anderson** as art & packaging director.

Boise Cascade Corp., Boise, Idaho, has named **Fred P. Thompson, Jr.**, gen. mgr. for the Western region of the company's paper-container div. **Russell J. Hickey** is now sales mgr. of Boise Cascade Kraft. Mr. Thompson will be responsible for production and sales of the Wallula (Wash.) and San Francisco container plants.

H. B. Fuller Co., St. Paul, has named **R. B. Jamison** national director of sales for the adhesive-supplier firm's Eastern Div. Mr. Jamison served most recently as sales mgr. of the Cincinnati plant.

Emanuel H. Kardon has been elected exec. v.p. and gen. mgr. of **United Container Co.**, Philadelphia. **Allan S. Voluck** has been named v.p. of sales. The company makes corrugated shipping containers.

Carleton H. Cameron has been elected v.p. of mfg. for **Michigan Carton Co.**, Battle Creek. Named to succeed Mr. Cameron as secy. and mgr. of converted paper products is **Joseph G. McCarthy.**

Raymond J. Kautz has been promoted to div. mgr. of the **Allegheny-Fuller Div.** of **Standard Packaging Corp.**, New York. Formerly sales mgr. of the div., Mr. Kautz came to Standard in 1958 from **Continental Can Co.**

Barry T. Leithead, pres. of **Cluett, Peabody & Co.**, has been elected to the board of directors of **West Virginia Pulp & Paper Co.**, New York. Mr. Leithead has been connected with Cluett, Peabody since 1929. The company joined with Westvaco in 1958 to organize **Clupak, Inc.**, for licensing production of Clupak stretchable paper.

H. Clifford Mayhew, v.p. of customer service for **Samuel M. Langston Co.**, Camden, N.J., has retired. He has been with the company for 35 years. Mr. Mayhew is succeeded by **Fred A. Leser, Jr.** Langston is a manufacturer of corrugated-container machinery and paper-mill slitters and winders.

Hooker Chemical Corp. has transferred its headquarters, New York district offices and export sales dept. to 666 Fifth Ave., New York 19.

Packaging Corp. of America, Evanston, Ill., reports the election of five senior v.p.'s. All five officers are drawn from the management of the three concerns which merged last year to form the present corporation. They are: **J. C. Morris**—board; **Robert G. Paramore**—container operations; **Kenneth R. Mull**—container sales; **G. V. Bayly**—cartons; **W. Harvey Mapes, Jr.**—

The 5th century invasion of England by the Angles and Jutes and later, the Danes provided the first spur to the silversmith's art in Britain. Paradoxically, no record exists of silver made in England during the Norman conquest (1066). Early applications were spiral decor and conventional interlacing patterns of Anglo-Saxon and Irish art. Kentish craftsmanship was peerless in the 6th century. Names like Sheffield and Sterling became identified with the penultimate in silvercraft. Beautiful silver-gilt cups, tankards, trays and spoons among the first works. The superior merits of English arts and crafts in medieval and Tudor times was evidenced by larger, more elaborate and costly silvercraft. French Huguenot influence (18th century) invoked great changes in decor of English plate, distinguished by austere simplicity and solidity. The classical spirit was reflected in later works by English, Scottish and Irish craftsmen.

Letterpress Satin Silver #0361

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Artcote pyroxylin papers are available in metallic coated gold, silver and copper finishes . . . gummed or ungummed, embossed or plain. Paper stock available in 60 lb. weight . . . cover stock available up to 15 point. All Artcote papers and cover stock accept halftone, four-color process, silk screen, gravure, offset lithography, letterpress, and flexographic printing. Write today for sample book.

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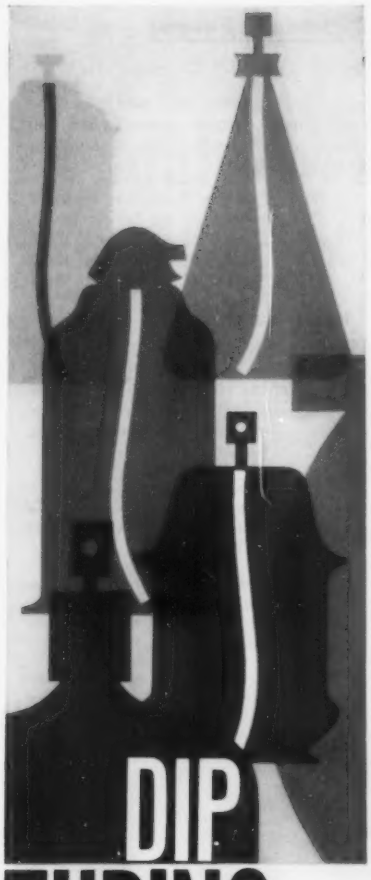

DIP TUBING *for aerosols, atomizers, squeeze bottles, lotion pumps, garden sprays,*

There are three big reasons why more manufacturers specify Action Plastics Dip Tubing than any other brand: a unique, fully automated manufacturing process, continuous quality control, and superior performance. We use only virgin materials for our more than 150 different tube types . . . available in varying diameters, wall thicknesses and formulations. A laboratory report is furnished with each shipment. For further information, write:

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ACTION PLASTICS, INC.

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Plants & People [*Cont'd*]

molded products. Facilities of the new company include container- and carton-converting operations, paperboard mills and molded-pulp plants.

A. Ralph Krigel has re-joined **Packaging Products, Inc.**, Kansas City, Mo. He will function as exec. v.p. of the firm which he helped to organize. A pioneer in the printing of transparent films, Mr. Krigel had been serving as Midwestern mgr. for another packaging firm since leaving Packaging Products.

Thomas S. Williams has been elected v.p. of operations for **Dixie Wax Paper Co.**, Dallas. Formerly v.p. in charge of the manufacturing div., he joined the company in 1948 as a project engineer.

Ball Bros. Co., Muncie, Ind., has purchased **Atlantic Zinc Works, Inc.**, and its sub., **Rolled Plate Metal Co.** of Brooklyn. Atlantic Zinc and Rolled Plate Metal make photoengravers' zinc alloys for the graphic-arts industry.

Chemcell, Ltd., a Canadian sub. of **Celanese Corp. of America**, is negotiating to purchase an interest in **Polybottle, Ltd.**, of Toronto, Ont., a manufacturer of blow-molded plastic containers.

Aero Supply Mfg. Co., Corry, Pa., has purchased an interest in **International Ultrasonics, Inc.**, Rahway, N.J. Aero Supply will assist in financing production of International's new ultrasonic continuous seam welder for aluminum foil and other thin metals.

Boise Cascade Corp., Boise, Idaho, has purchased the corrugated-container div. of **Schmidt Lithograph Co.**, San Francisco. Boise Cascade is engaged in paper production and converting.

Production will begin shortly at a new polyethylene-film plant in Fresno, Calif., reports **Dow Chemical Co.**, Midland, Mich. Dow also has formed a new company, **Dow Chimica Italiana**, with headquarters in Milan, Italy.

A 120,000-sq.-ft. folding-carton plant in Page Industrial Center, near St. Louis, has been opened by the **Weyerhaeuser Co.**, Tacoma. The new plant will operate under the name of **Weyerhaeuser Co., Boxboard & Folding Carton Div.** The company's folding-carton-manufacturing facilities formerly were known as **Gereke-Allen Carton Co.**

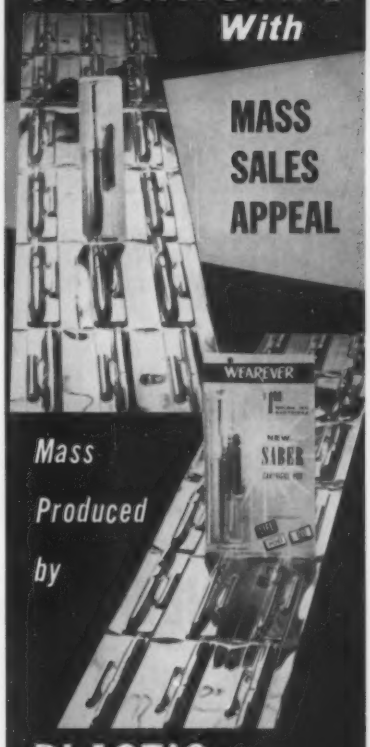
Kehr Products Co., manufacturer of flexible packaging, is now located at 525 Davisville Rd., Willow Grove, Pa.

Sealomatic Electronics Corp. has moved into larger quarters at Scott Ave. and Randolph St. in Brooklyn.

Ehrman & Reiner, Inc., industrial designer, has moved to 9 E. 45 St., New York.

Excelsior Transparent Bag Co., Yonkers, N.Y., has completed the construction of new plant facilities which will increase by 30% the company's capacity

VERSATILE PACKAGING *With* MASS SALES APPEAL



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PLASTIC ARTISANS, Inc.

The photos show the dual-use versatility of PA's sales-exciting packaging. In two cases, WEAREVER® applied the same product-fitting dome, (mass-produced from the same die) to two different packages. These double-duty performances help to reduce costs and simplify inventory.

Use Plastic Artisans' experienced packaging knowledge to help improve your sales. Send for PA's guide to formed plastic "Display Packaging" or ask to have a representative call.

David Kahn, Inc. uses the same Plastic Artisans' DOMEPAK to serve two different WEAREVER® put-ups.

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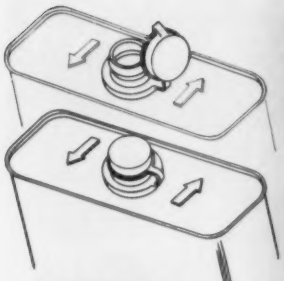
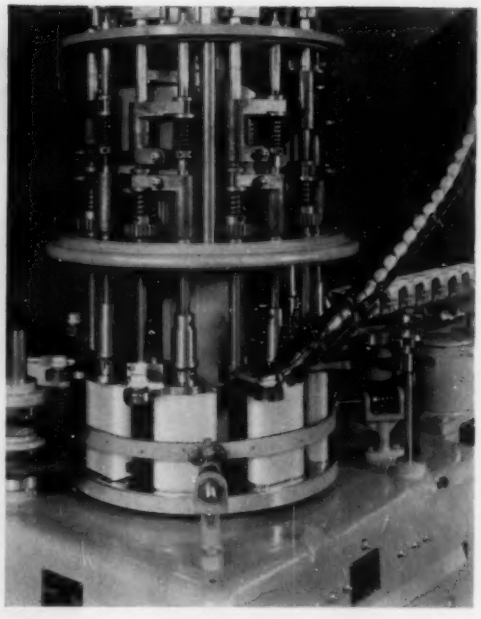
PA

Custom-designed, mass produced packages, package components, sampling devices, etc. in clear, opaque and colored plastics.

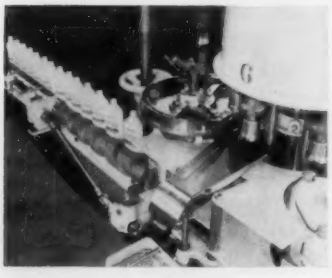




HERE'S BEST WAY TO APPLY THE NEW PLASTIC "FLIP CAPS"

Plastic "Flip Caps" give the new 1960 look to both "F" and "I" type cans. Consolidated has perfected the dependable, fully automatic method for applying these new plastic closures which replace the soldered screw-neck nozzles which have been in use for over 25 years.

The new D8-FS Consolidated Capper is available in models with 2 to 8 spindles and with capacities from 40 to 250 containers per minute. The plastic fitments with *captive plastic caps* are fed from a hopper and inserted by straight down pressure rather than rotary screw motion previously used on metal screw caps. Caps are oriented with hinge strap parallel to length of can. Cost-consuming soldering is eliminated by the neckless can — your packages are up-dated for increased consumer appeal. Consumers prefer this type cap because of convenience of handling. Both quart and pint sizes can be handled with equal ease.



Consolidated D6-F Capper in use at S. C. Johnson & Co. applying plastic screw-type closures with captive caps to plastic containers. The new design, adjustable tension grips hold plastic containers firmly without collapsing them. Capacity 120 containers per minute.

For complete information about this most modern equipment for applying these most modern caps, write today.

CONSOLIDATED PACKAGING MACHINERY CORP.

A Subsidiary of International Paper Company

1400 West Avenue, Buffalo 13, N. Y.

Plants & People [*Cont'd*]

for producing film bags and paper-film laminates. **Barbara Jean Cohen** has been named regional sales coordinator of the company.

Foilcraft Printing Corp. has relocated in 45 Cherry Valley Rd., West Hempstead, N.Y. Sales offices will be maintained at 124 E. 40 St. in New York.

Promotions

Web Leslie: to district sales mgr., **Milprint, Inc.**, Milwaukee. He will have charge of the company's sales force in Michigan, Ohio, Indiana, northern Kentucky, western Pennsylvania and northern West Virginia.

Robert D. Hillmann: to Western district sales mgr., film operations, packaging div., **Olin Mathieson Chemical Corp.**, New York.

John T. Hastings: to asst. to the mgr. of the industrial sales div., **The Dobeckmun Co.**, Cleveland, div. **The Dow Chemical Co.**, Midland, Mich.

Val Reisig: to asst. advtg. mgr., plastics div., New York, **Eastman Chemical Products**, Kingsport, Tenn.

Donald T. Ellis: to asst. gen. mgr., Container & Chemical Specialties Div., **Dewey & Almy Chemical Div., W. R. Grace & Co.**, Cambridge, Mass.

Roland Blumer: to Cleveland district sales mgr., **Package Machinery Co.**, East Longmeadow, Mass.

Appointments

John A. West: from **Monarch Marking Co.** to market development mgr., **Package Products Co.**, Charlotte, N.C. The company designs, prints and converts paper, film and foil.

Donald J. Keen: from **American Management Assn.** to director of public relations, **Lippincott & Margulies**, industrial designer, New York.

Donald Zucker: from **Oneida Paper Products** to divisional sales mgr., Southeast area, **Bagcraft Corp. of America**, Chicago.

Obituaries

Reuben B. Robertson, Jr., pres. of **The Champion Paper & Fibre Co.**, Hamilton, O., was killed in an automobile accident March 13. He was 52. Mr. Robertson, who succeeded his father as Champion pres. in 1950, was prominent in national affairs. In 1955 he took a two-year leave of absence to serve as U. S. Deputy Secretary of Defense. Previously, he had held other posts in Federal agencies. He also was associated with many industrial and business organizations. At one time, he was a v.p. and member of the executive committee of **American Paper & Pulp Association.**

PAPER and BOARD for modern packaging

There's hardly an industry or business that doesn't have some use for some Gilman Paper Company products, produced under sustained quality controls at two fully integrated mills by the third generation of the founding family.

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for food packaging, drinking cups, cigarette cartons, milk containers, linerboard, file folders, and others.

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for all purposes including: colored kraft, creped kraft, kraft for laminating, waxing, asphalting, twisting, wet strength, pH control, water-repellent, insulating, vapor barrier, cable wrap, coin wrap, stuffer paper, masking paper and creped closure tape.

GUMMED SEALING TAPE
regular and reinforced, in natural or colors, plain or printed

STAY TAPE, VENEER TAPE

CELLUCORD® (KRAFTCORD®)
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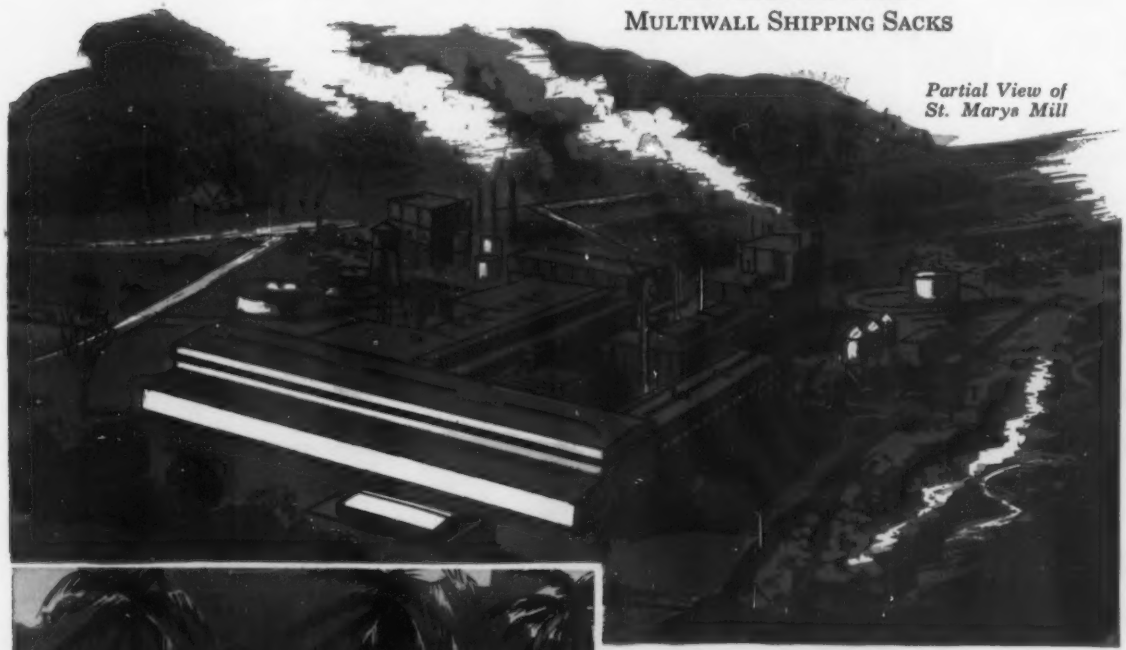
GROCERY BAGS AND SACKS

MULTIWALL SHIPPING SACKS



Partial View of St. Marys Mill

New 300,000 sq. ft. addition to converting facilities at St. Marys, Ga., scheduled to go "on stream" in February '60.

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PAPER COMPANY

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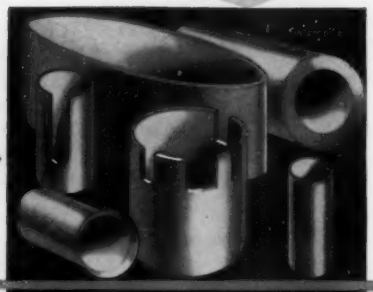
Subsidiaries:
Kraft Bag Corporation
St. Marys Kraft Corporation
Cellucord Corporation
Paper Mills and Converting Plants at St. Marys, Ga. and Gilman, Vt.

Use Quality Cleveland Container Tubing...

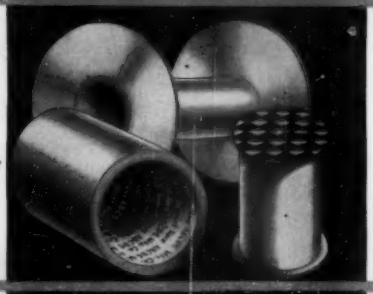
because it is versatile...attractive...strong!

Industrial Tubing



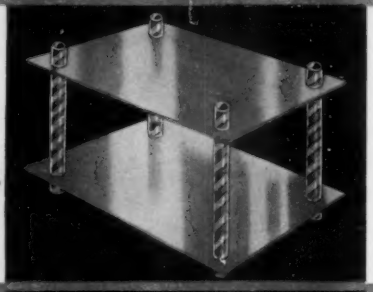
Whatever the application, we can fabricate tubing to your exact needs . . . at low cost! Made of highgrade chipboard or kraft, and in combination with acetate, foil or other materials. Sizes range from ⅛" to 24" in diameter. Common uses include spacers, support tubes, protectors for precision parts, and mailing tubes. Can be fitted with metal end plugs.

Spools and Cores



The functional answer to many packaging problems! Available in a wide range of sizes, closely butted and evenly bonded. Spools and cores are especially suitable for rubber tubing, industrial tape, many kinds of ribbons, wire, cord, papers and films. A trademark can be imprinted on the inside of cores. Economical in both long and short runs.

Point of Purchase Displays



A versatile and inexpensive component for displays . . . made to *your* specifications! Low in cost, this tubing is available in popular diameters and lengths and can be interfit, slit or punched. Choice of solid colors, "candy stripes," or textured finishes from a large selection of papers and foils.

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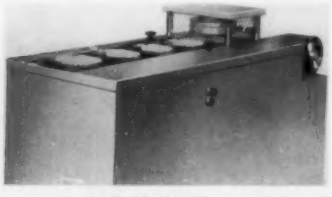
Equipment & Materials

[*Continued from page 52*]
paper, with the inner ply coated with polyethylene or other heat-sealable material. Depending on the product protection required, bag plies are made up of various combinations of kraft paper, kraft and foil or polyethylene-coated kraft and foil. A feature of the bag is that its outer plies are offset, leaving the inner ply exposed to take a direct heat seal. Previously, the supplier points out, it was impractical to heat seal the inner ply of a multiwall bag because the seal had to be made through all the plies. The company also notes that the new bag not only is low in initial cost but that shipping costs are lower than those of rigid containers because of the difference in tare weight. *Union Bag-Camp Paper Corp., 233 Broadway, New York 7.*

Machine applies closures to foil containers

Designed especially for use by medium-volume food processors is Ekco-Alcoa's Model IV-M, a machine which applies closures to aluminum-foil containers. Using basic mechanical motions, the new unit operates at a rated speed of 60 containers per minute. Reduced machinery wear and minimum maintenance are achieved by the elimination of compressed air, hydraulic systems and electrical controls, says the manufacturer. The straight-line machine is reported to be capable of instantly variable packaging speeds. Other features cited by the supplier are: smooth conveyor action for liquid products, adaptability for lanced or annular-groove closures, accessibility for convenient cleaning and maintenance, central lubrication, and ink or metal-stamp dating. *Ekco-Alcoa Containers Inc., Wheeling, Ill.*



New polyethylene can-or-bottle cap

A low-cost, linear polyethylene screw cap that eliminates the need for a liner is offered by Dover Molded Products. Called Un-A-Top, the plastic cap contains a built-in "gasket" as part of the basic cap, which serves as a sealing band. According to the supplier, the linerless all-polyethylene cap is inert to most products and cannot corrode on exposure to liquids. The company also points out that the one-piece cap eliminates the problems of liners sticking to container spouts and of lost liners which cause leakage. Cost of the cap (which is available in a variety of colors, sizes and designs) is said to be competitive with metal caps. *Dover Molded Products Co., Dover, O.*

Economical foil bread-wrapper band

A 6-in.-wide foil bread-wrapper band is offered to bakers by Rap-In-Wax. According to the supplier, the band adds quality appeal and shelf impact to wrapped loaves of bread while adding only a fraction to packaging cost. A variety of stock designs, in various color combinations using transparent and opaque inks, is available. *Rap-In-Wax Co., 159 26 Ave., SE, Minneapolis 14.*

Greaseproofing polyethylene resin

Petrothene 205-15 is the latest polyethylene-coating resin available from U. S. Industrial Chemicals. The greaseproofing resin, says the supplier, develops maximum adhesion to a variety of substrates, including porous types and such non-porous materials as cellophane and foil. It also is claimed to permit excellent heat seals over a wide range of sealing temperatures. An important characteristic cited for the resin is that it provides 100% greaseproofness at a lower coating weight than other resins of similar melt index and density. The resin has a density of 0.924 and a melt index of 3.0, the company reports. *U. S. Industrial Chemicals Co., Div. National Distillers & Chemical Corp., 99 Park Ave., New York 16.*

Film wrapper and label imprinter

Oliver Machinery introduces a new film-wrapping machine and a rotary label imprinter. The company's No. 899 wrapper can accommodate polyethylene, cellophane and other films, as well as waxed paper. The unit's film-feed section has an automatic motorized unwind system, which reportedly assures smooth, continuous feeding. A photo-electric cell registers printed wrappers. Two types of bottom and end seals can be made on the machine. They are: over-all bottom heat seal, narrow bottom-line seal, over-all end heat seal, and narrow-line end seal. Six models of the basic machine are available, to handle packages in a wide range of sizes. Wrapping speeds on these machines, says the company, range from 20 to 70 packages per minute. The supplier's new rotary label imprinter can handle roll-fed labels ranging in width from 1 to 5 in. and in length from 1¼ to 3 in. A molded-rubber impression plate produces clear, sharp imprint of even small type, says the company. *Oliver Machinery Co., Grand Rapids, Mich.*

Improved setup-box stacker

Simplified size changes and increased speeds are among the advantages reported by FMC for a new, automatic setup-box-stacking machine. According to the company, stacking speeds from 28 to 100 units per minute are achieved, enabling the machine to handle the output of any wrapping or staying machine. Boxes as small as 4 in. long by ½ in. deep can be accommodated. Simplicity of machine construction provides for smooth operation and minimum maintenance, says the supplier. For additional information, contact *FMC Packaging Machinery Div., 4942 Summerdale Ave., Philadelphia 24.*

Unit applies tape closure to sewn bags

Bemis Bro. is marketing a bag-closing machine which applies a thermoplastic-tape closure over sewing on open-mouth multiwall shipping sacks. The unit (called the

Thermoplastic Tape Top) uses a special thermoplastic tape (left in accompanying photo) to make the closure. This tape (Bemistape 400) is claimed to combine economy and great tensile and tear strength. In operation, the machine first makes a standard sewn closure. The thermoplastic tape, fed from a reel, then is folded and creased over the

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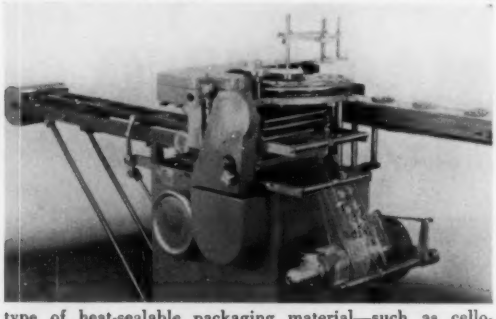
stitches, after which heat sealing is performed under controlled temperature and pressure. All machine operations are automatic once the filled bag enters the sewing guide. *Bemis Bro. Bag Co., 111-H N. Fourth St., St. Louis 2.*

85-per-minute candy wrapper

New from Crompton & Knowles is a candy-wrapping machine that is reported to operate at speeds up to 85 units per minute. Round, square, rectangular and odd-shaped products can be packaged on the new Model CKDW2. Any



type of heat-sealable packaging material—such as cellophane, foil, glassine and waxed paper—can be handled, says the supplier. Optional machine equipment includes such accessories as labeling attachments, electric-eye registration units, automatic card feeders, automatic card ejectors and code daters. *Crompton & Knowles Packaging Corp., Holyoke, Mass.*

Linerless linear-polyethylene tube

Bradley-Sun is marketing a linerless linear-polyethylene tube for petroleum-based and other grease-containing products. According to the supplier, the tube (made of Phillips Chemical's "Marlex 5000 Type 3") can be manufactured for 10% less than comparable containers with internal linings. The bottom-filled tube's orifice is an integral part of the container, not a separate piece. Among other advantages claimed for the linear-polyethylene tube are that it can be printed easily in multiple colors and that it can be externally barrier coated to reduce oxygen transmission. For more data, contact the supplier. *Bradley-Sun Div., American Can Co., Hillside, N.J.*

High-speed film-casting unit

A new film-casting unit, which operates at reported speeds of up to 500 feet per minute, has been developed by National Rubber Machinery. The machine will cast such films as conventional or linear polyethylene, polypropylene and nylon in varying thicknesses and widths from 36 to 72 in. (wider on request). It is claimed to produce high-clarity film, ready to print without reprocessing. The rolls are balanced to assure vibration-free, true running at highest processing speeds, according to the manufacturer. Other features cited for the new unit include: turret-type wind-up with constant tension control, automatic hot-knife cut-off and transfer, variable-width knife slitting, and an integral trim collector ducted for connection to collector or granulator. *National Rubber Machinery Co., Akron 8, O.*

Improved luncheon-meat packaging unit

Marathon reports the availability of a new Advac machine for the automatic packaging of vacuum-packed luncheon meats in combination film-and-paper-tray containers. The new machine, says the supplier, is larger, faster and more durable than previous models. It also has increased heating and seal-setting areas. Using any pouch style or material, packaging speeds from 20 to 50 trays per minute can be achieved on the new Model GM 1500 machine, the manufacturer reports. Details are available from *Marathon, Div. American Can Co., Menasha, Wis.*

Photoelectric control system

Designed for automatic inspection, counting and control operations are Standard Instrument's new Robot-Eye photoelectric controls. The three elements of the basic photoelectric system—light source, photo cell and amplifier—may be interconnected by plug-in terminals and receptacles. Advantage of this design, says the supplier, is that the packager user can select from a wide variety of units those best suited for his job requirements, at minimum expense. The control system operates by beam interruption or reflection. Effective operating range is up to 20 ft. and operating speeds are as high as 1,000 per minute, says the supplier. *Standard Instrument Corp., 657 Broadway, New York 12.*

Release coating for paper containers

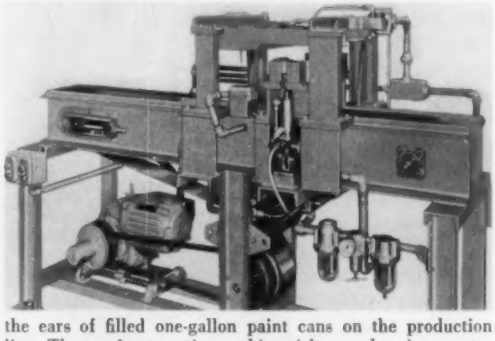
Resisto Chemical has developed a plastic release coating for paper and fibre containers. Known as Tar-Dux, it reportedly prevents such materials as asphalt, butyl rubber, adhesives, resins and waxes from adhering to their containers. The water-phase, solvent-free compound forms an invisible film when dry. After application to container walls, the release coating can be oven dryed in 30 seconds at a temperature of 250 deg. F., says the supplier. Among the properties cited for the product are that it is inert, water insoluble, scuff resistant and resistant to hot materials at pour tempertures up to 400 deg. F. *Resisto Chemical, Inc., Dri-Dux Div., Wilmington, Del.*

Closure device for bulk bags

Tipper Tie introduces the Cello-Tie closure machine, which is designed especially for tying polyethylene or other large plastic bags that are used as liners in barrels or drums. The new unit is suggested for use in the packaging of such products as industrial chemicals, fertilizers and bulk quantities of potatoes. It can be set in various positions on conveyor, belt or automatic-feed lines. The machine applies flat aluminum clips as closures on filled bags. For details, contact *Tipper Tie Products of New Jersey, Union, N.J.*

New can-handling machinery offered

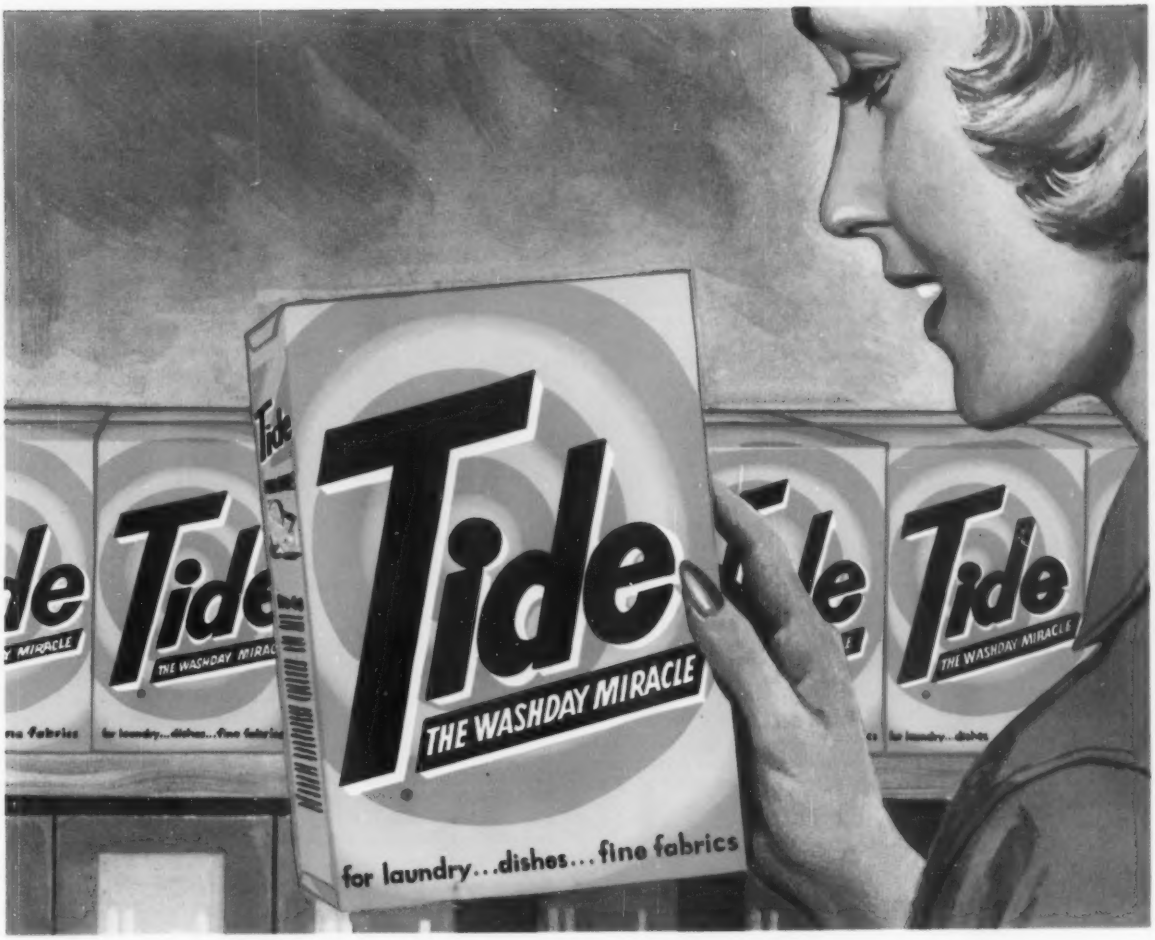
Two new machines are available from Continental Can—a bail inserter and a unit for applying polyethylene nozzle-and-cap combinations. The former, known as the Model 475-BIM bail-inserting machine, inserts pre-formed bails into



the ears of filled one-gallon paint cans on the production line. The semi-automatic machine (shown above) operates at the rate of 25 cans per minute, says the supplier. In operation, the unit's assembling jaws automatically register on the ears of the can. This feature, the company points out, eliminates difficulties when running random-size cans on which the ears are not all located the same distance from the can end. The supplier's other new machine is a hand-operated device for applying "Flip Cap" polyethylene nozzle-and-captive-cap combinations to round and oblong cans. The machine insures positive insertion of closure units at speeds up to 20 per minute, says the company. *Continental Can Co., 100 E. 42 St., New York 17.*

Versatility in pressure forming

High-speed forming of hard-to-form thermoplastic sheets is a characteristic cited by Atlas-Vac for its new pressure-forming machine. Contact heating and air pressure are



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utilized in the production and trimming of blisters, food trays and other packaging forms from oriented polystyrene and other thermoplastics. The unit features automatic trimming and indexing systems. A low-profile conveyor system permits the addition of tools smaller than the standard forming area without change-over of the hot-plate system. *Atlas-Vac Machine Corp., Rochester 21, N.Y.*

Low-cost plastic-fabrication process

A method of molding large items, such as 15-gal. drum liners, from thermoplastic materials at a reportedly low cost is being introduced into the U.S. by Spencer Chemical. Called the Engel Process, it involves the fusing of powdered thermoplastic (polyethylene, polypropylene, nylon, etc.) in an oven. According to Spencer, it can be adapted to the forming of hollow items of almost unlimited size in a relatively inexpensive mold. The company has concluded an exclusive agreement with the Vaessen-Schoemaker Co. of Holland, under the terms of which Spencer will license the process to a limited number of fabricators in this country. Spencer reports that it will supply a special type of powdered polyethylene which is used in the process. To aid in the development of this new activity, the supplier has begun construction on a pilot plant to develop improved grades of the powdered polyethylene, to demonstrate the process and to give technical assistance in produce development. For further information, contact *Spencer Chemical Co., Dwight Bldg., Kansas City 5, Mo.*

Fibrous vinyl and styrene resins

Vinyl and styrene polymers in the form of highly oriented fibres are available in developmental quantities from Union Carbide Plastics. Fibre lengths vary up to 3/16 in. The fibres are irregular in shape, with diameters ranging from two to 200 microns. The vinyl resin is designated VXKA-6112 and the styrene resin is designated SXKA-0121. These fibrous resins are reported to have application in the preparation of specialty papers, in pulp and paper molding and in laminates. *Union Carbide Corp., Union Carbide Plastics Co. Div., 30 E. 42 St., New York 17.*

Semi-automatic wrapping machinery

Two semi-automatic machines, designed for all-purpose wrapping jobs, have been introduced by Elgin. The EZB (illustrated) is engineered to handle polyethylene and other limp films, for wrapping flat packages or cartons containing such products as candy, baked goods, soft goods and notions. The unit, controlled by foot treadle, is adjustable for underfolding, overwrapping and heat sealing. It operates at up to 15 packages per minute, says the supplier. The other new machine, called the EZA, handles cellophane, foil and waxed paper in wrapping operations. *Elgin Mfg. Co., Elgin, Ill.*

New labeling versatility

New Jersey Machine reports that its Pony Labelrite label-applying machine is now available with an extra motion so that normal horizontal delivery of the label can be converted to the vertical. The supplier points out that the unit's new versatility increases the range of its application for labeling containers. The first of the improved labeling machines is now being used by a meat-packing firm in an integrated line for packaging meat products in glass containers. *New Jersey Machine Corp., Hoboken, N. J.*

Full-visibility tomato tray

New from Standard Folding Trays is the Tripl-Tite View-All tray, for use by packagers of fresh tomatoes and similar items of produce. Die-cut openings on the paperboard tray"s sides and bottom permit maximum product visibility. But, says the supplier, double-thickness bonded walls make the tray package as strong as conventional uncut containers of the same type. The new tray is shipped flat to users and can be set up on existing tray-erecting machinery. Additional data on the new container are available from *Standard Folding Trays Corp., 85 St. and 24 Ave., Jackson Heights 69, N.Y.*

Economy in glue application

Reduced glue consumption and elimination of waste are the advantages reported by Emhart for the forced-feed system of glue application it has developed for Standard-Knapp case gluers and sealers. Called Glu-Line, the new system uses valve-controlled applicators to apply glue in stripes, rather than as a solid band. The Glu-Line system, which can be incorporated on existing case gluers and sealers in the supplier's line, eliminates glue pots, rollers and cams. Stripe application of glue is reported to reduce considerably the amount of glue required. The amount of glue can be controlled and changed by adjusting air pressure. *Emhart Mfg. Co., Portland Div., Portland, Conn.*

Coder marks variety of surfaces

A continuous- or intermittent-action coding attachment is available from Algene Marking Equipment. The automatic device uses specially developed inks to mark such varied surfaces as metal, kraft paper, corrugated, glass, plastics, film and waxed paper. Printing area ranges up from ¾ by 12 in. Interchangeable rubber type and strips for quick changes are provided. Cited features of the coder include positive friction drive, long-run ink fountain and adjustable tension for clear impression. *Algene Marking Equipment Co., Garfield, N. J.*

Adhesive for polyurethane foams

A fast-acting adhesive, which reportedly offers production-line bonding of polyurethane foams to a wide range of materials, is now available from Schwartz Chemical. Called Rez-N-Glue 334, it is brush applied to both surfaces, which are pressed together after they have become tacky. The resultant bond is strong enough for almost immediate product handling and permanent bonding is achieved within 30 minutes, says the company. The synthetic-rubber-base adhesive is supplied in quart, gallon and 55-gal. containers. More information can be obtained from *Schwartz Chemical Co., Inc., 50-01 Second St., Long Island City 1.*

New filling-machinery equipment

National Instrument reports that its new Filamatic automatic liquid filler features an improved indexing and bottle-positioning mechanism. According to the supplier, the new design minimizes maintenance and assures trouble-free operation. The bottle-positioning mechanism centers each container precisely under the filling nozzle during the fill cycle. The unit is available with two or four spouts, and is adjustable up to 120 fills per minute, says the supplier. Other new equipment offered by the company includes a pump attachment which adapts Filamatic portable filling machines for filling semi-viscous and viscous fluids. It is

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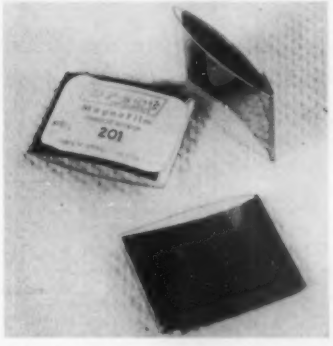
called the Type FDS pump. Also available is a new line of stainless-steel reciprocating pumps which reportedly will dispense accurately measured volumes adjustable up to 16 oz. per stroke. The pumps are designed for attachment to rotary fillers. Additional data on all this equipment can be obtained from *National Instrument Co., 4119-27 Fordleigh Rd., Baltimore 15.*

Super-sensitive corrosion indicator

Now available to packagers of precision metal products is an ultra-sensitive "sensing element," for packaging with the product, that detects the corrosion of metal. Called the Model 201 MagnaFilm Corrosion Indicator, it is supplied by Crest Instruments. The essential element of this unit is a vacuum-deposited film of metal, two to 50 millionths of an inch thick. This sensitive film detects the presence of a corrosive condition before the product itself can be attacked, and "signals" the presence of such a condition by itself becoming corroded and changing in color from a high-gloss silver to a reddish brown. According to the company, special manufacturing techniques provide the sensitivity and reproducibility required to detect as little as five billionths of an inch of metal loss. The Model 201 (illustrated) is designed for use in small packages of precision parts where a visual indicator is sufficient. Other, electrical, models are available for installation where visual indicators are not practical. *Crest Instruments, Div. Magna Products, Inc., Santa Fe Springs, Calif.*



High-speed waxing unit

A new waxing machine, the Post High Gloss Cold Water Waxer, is available from Post Machinery. According to the company, the unit will provide high production and will wax sheets up to 50 in. wide. The supplier reports that runs of 60,000 butter cartons per hour have been made without operating the machine at maximum speed. Standard formulations, polyethylene blends and microcrystalline blends can be handled by the machine. Its twin wax tanks are electrically heated and thermostatically controlled. Wax-applicator rolls also are electrically heated, to reduce start-up time. An aluminum-frame-mounted carton-carrying mechanism on the machine's water tank can be raised out of the tank for easy access and cleaning. *Post Machinery Co., Beverly, Mass.*

Polystyrene-and-cork bottle stopper

Polystyrene-topped cork stoppers for wine and spirit bottles are available from Latchford. The plastic stopper head, which is permanently adhered to the cork, is impervious to wines or spirits, will not swell or shrink under humid or dry storage conditions, and is completely odorless, says the supplier. The company also reports that design of the stopper head assures accurate centering, while internal flutes reduce costs by minimizing weight. Product names, trademarks or other data can be molded into the polystyrene stopper head. The item is offered in a variety of basic colors and shades. Also available for use with the stopper is a shrinkable cellulose band which can be imprinted in one or more colors. Additional information is offered by the supplier. *Latchford Package Co., 1849 N. Main St., Los Angeles 31.*

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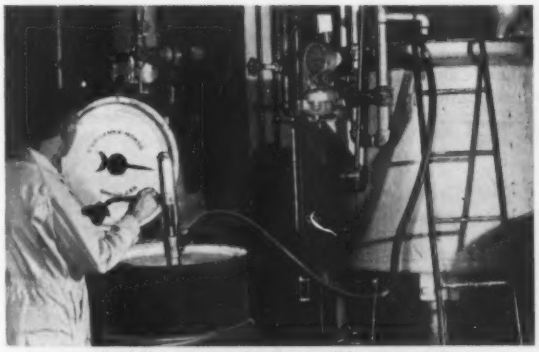

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For Your Information

The **Can Mfrs. Institute** reports that metal-can shipments during 1959 reached an all-time peak, exceeding by about 3% the previous record, set in 1956. Leading gain was in the use of cans for soft drinks, where there was an increase of 34%. CMI points out that the record figures were achieved despite plate shortages in the latter part of the year due to the steel strike. Substantial gains were registered in container usage for beer and miscellaneous non-foods. The can-making industry, the nation's third largest user of steel, marks its 150th anniversary in 1960. Industry observers forecast a 3.5% increase in shipments for the sesquicentennial year.

A one-day seminar on packaging was held Feb. 11 at **York Junior College**, York, Pa. More than 50 packaging executives representing 21 companies in the area attended the seminar. The program included discussions of paper manufacture, paperboard containers, fibre drums and lumber and wooden boxes. The college is planning to sponsor a similar seminar on packaging in the near future.

J. E. Bouhl of Anaconda Aluminum Co. was elected pres. of the **Laminated Foil Mfrs. Assn.** at the organization's 12th annual meeting in New York, Feb. 23. **Maurice Denenberg** of Denny Corp. was named vice president.

Elgin

Edwin S. Elgin has been elected pres. of the **National Flexible Packaging Assn.** Mr. Elgin, who is v.p. of the plastics div. of the Chase Bag Co., served as exec. v.p. of the association in 1959 and was previously chairman of its polyethylene-products committee. He was elected pres. at NFPA's annual meeting held recently in New York.

The **Society of Packaging & Handling Engineers** is conducting its 1960 Industrial Packaging Competition in conjunction with the **Packaging Material Handling Show** being held in Los Angeles, May 11-13. The competition features eight competitive categories: solid or corrugated fibre boxes; general, export packages; military packages, and material handling. Entries are being accepted until May 8 by the Competition Chairman, SPHE, P. O. Box 22082, Los Angeles.

The Polyethylene Extrusion Coaters Group of **Specialty Paper & Board Affiliates, Inc.**, held its annual meeting at the Park Lane Hotel in New York, Feb. 25. **John C. Davis** of H. P. Smith Paper Co. was elected chairman and **Savage C. Frieze, Jr.**, of Lowe Paper, vice chairman. In addition, three new officers were elected to the exec. committee: **Malcolm McVickar**, Crocker, Burbank Papers, Inc.; **L. S. Tobias**, International Paper Co., and **J. T. Thomas**, Thilmany Pulp & Paper Co.

The **Michigan State University Packaging Society** is holding its second annual packaging exposition May 13-14, at the university in East Lansing. The exposition is designed to interest students in packaging-field careers and to demonstrate the value of a school of packaging. It will include graduate and undergraduate research displays, independent student projects and general laboratory displays.

New exec. secy. of the **Technical Assn. of the Pulp & Paper Industry** is **Philip E. Nethercut**, formerly secy.-treas. **A. John Winchester** becomes technical secy., in which capacity he will coordinate the activities of the organization's technical divisions and of the headquarters technical staff. Both men were elected at TAPPI's recent 45th annual national meeting in New York. At the same time, **James R. Lientz** of Union Bag-Camp Paper Corp. was re-elected to a one-year term as TAPPI pres. Re-elected v.p. was **Harold M. Annis** of Oxford Paper Co. TAPPI reports that the annual meeting attracted a record-breaking registration of more than 3,000 industry representatives.

The **American Institute of Graphic Arts** reports that May 13 is the deadline for submission of entries in its forthcoming exhibition, **AIGA Packaging 1960**. The exhibition, which will be held this autumn (dates to be announced later), will consist of a display of packages judged to be outstanding from a graphic-arts viewpoint by a panel of advertising, packaging and design experts. To be eligible for the competition, packages must have been released between Sept. 1, 1958, and April 1, 1960. All entries must be accompanied by a 50-word statement providing marketing and design-development information. There is an entry fee of $5 for each package. Information is available from American Institute of Graphic Arts, 5 E. 40 St., New York.

The **Italian Packaging Institute** reports the establishment of IPACK, a new biennial international packaging exposition. The first event, together with a materials-handling exhibition, will be held Feb. 19-28, 1961, in Milan. **Dr. Mario Saggin**, chairman of Italian Packaging Institute, has been named chairman of IPACK. Further information on the international packaging show can be obtained from the institute or from the Italian packaging magazine, *Imballaggio*, Via Mantegna 6, Milan.

L. W. Gould, asst. v.p. of Crown Zellerbach Corp., was elected pres. of **The Paper Bag Institute** at the organization's annual meeting. He succeeds **Sydney K. Bradley** of Union Bag-Camp Paper Corp. **D. P. Stout** takes over Mr. Gould's former position as v.p. of the institute. He is gen. mgr. of sales for the Containerboard and Kraft Paper Div. of Continental Can Co.

Gould

Stout

Koppers Co. has prepared a 36-page "Directory of Plastic Packaging Suppliers" to provide assistance in the selection of sources for plastics packages. The directory lists both custom and proprietary plastics-packaging molders and extruders in the U. S., with a description of the type of service each company is equipped to pro-

Events

May 1-4—**Super Market Institute**, 23rd annual convention, Convention Hall, Atlantic City, N. J.

May 6-7—**Michigan State University Packaging Society**, second annual packaging exposition, MSU campus, East Lansing, Mich.

May 7-12—**Society of the Plastics Industry**, national plastic molders and suppliers conference, Hotel Americana, Bal Harbour, Fla.

May 11-13—**Third Western Regional Material Handling & Industrial Packaging Show**, Great Western Exhibit Center, Los Angeles.

May 16-18—**Chemical Specialties Mfrs. Assn.**, 46th mid-year meeting, The Drake Hotel, Chicago.

May 22-24—**National Fibre Can & Tube Assn.**, annual meeting, Princeton Inn, Princeton, N. J.

May 23-26—**Design Engineering Show**, New York Coliseum.

May 24-25—**Produce Packaging Assn.**, national produce executives conference, Ambassador East, Chicago.

June 10-26—**British Exhibition of Industry & Technology**, New York Coliseum.

June 12-25—**Industrial Management Center**, 7th annual materials handling and packaging training course, Lake Placid Club, Lake Placid, N. Y.

June 20-21—**Packaging Institute**, petroleum packaging commitee meeting, Philadelphia.

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F.Y.I. [*Continued*]

vide. Copies of the directory may be obtained without charge by writing to the Plastics Div. of Koppers Co., Koppers Bldg., Pittsburgh.

"Fresh Ideas That Move More Produce" is the theme of the 1960 National Produce Executives' Conference, to be held at the Ambassador East Hotel in Chicago, May 24-25. The two-day, seminar-type meeting, sponsored by the **Produce Packaging Assn.**, is part of an intensive program to assist management to develop capabilities and to share information on improved produce packaging and marketing methods.

A conference on flexible packaging for military food items, sponsored by the **National Research Council** in cooperation with the **U. S. Army Quartermaster Food & Container Institute for the Armed Forces**, was held on March 16 and 17 at the Moraine Hotel, Highland Park, Ill. Approximately 250 representatives from the Armed Forces and from packaging discussed technical aspects of the development of flexible containers for use in military feeding.

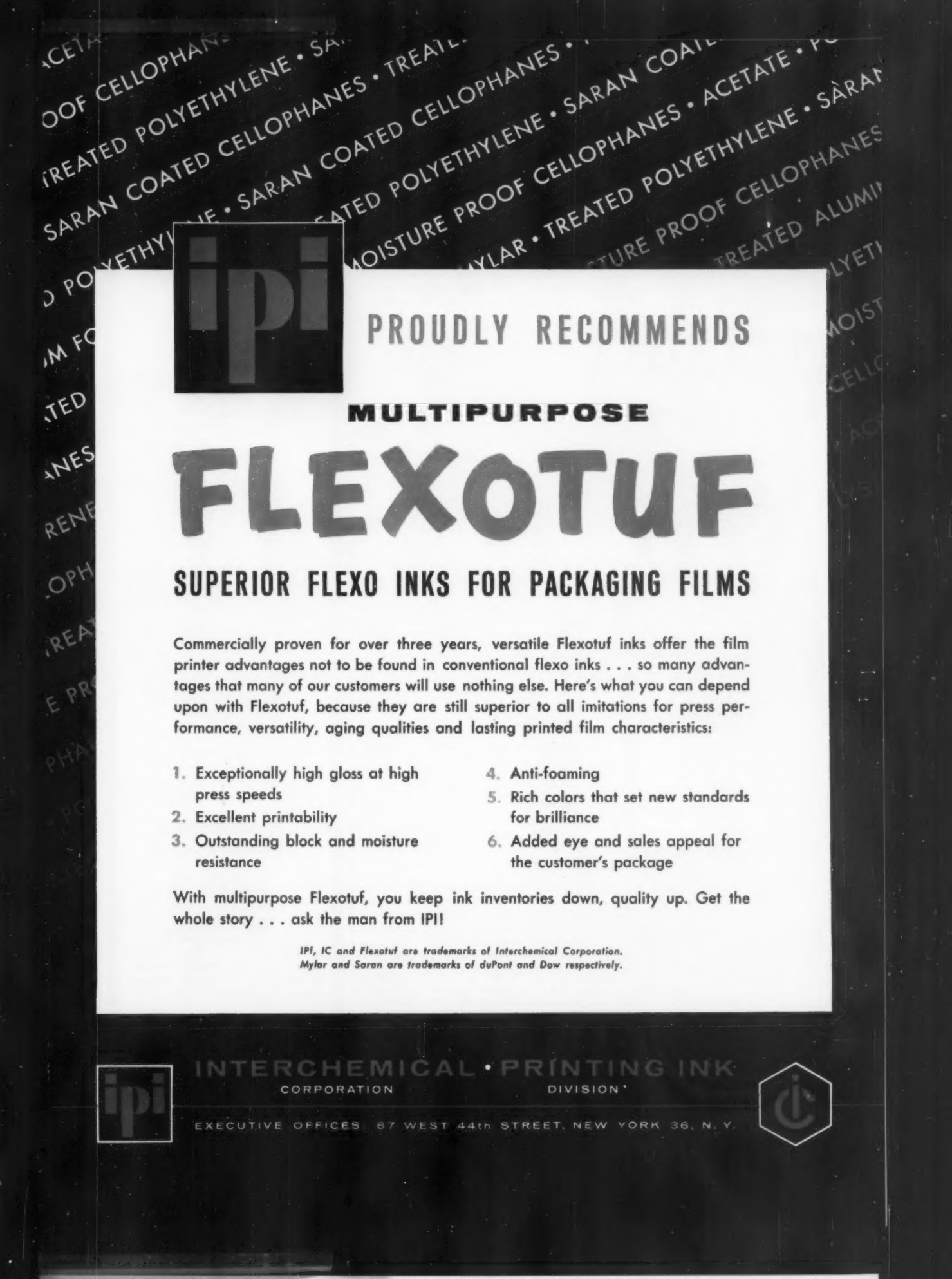
The 20th annual meeting of the **Institute of Food Technologists** is being held at the Masonic Memorial Temple and at the Fairmont and Mark Hopkins Hotels, San Francisco, May 15-19. The event will feature more than 200 technical papers and some 100 exhibits. All phases of food technology, from basic research to packaging, are to be considered. The institute is also sponsoring a food conference at the Princess Kaiulani Hotel in Honolulu, May 20-25.

Executives of leading international corporations and experts in the fields of science, sociology and design will speak at the **10th International Design Conference** in Aspen, Colo., June 19-25. Further details may be obtained from the Executive Secretary, International Design Conference, 6 E. Lake St., Chicago 11.

The **Third Western Regional Material Handling & Industrial Packaging Show** will be held May 11-13 at the Great Western Exhibit Center in Los Angeles. According to show sponsors, orders for booth space are coming in 25% faster than for the previous exhibition. Technical conferences will be held in conjunction with the show.

Arthur Schaefer of New Jersey Machine Corp. has been appointed vice chairman of the Technical Coordinating Board (formerly the Technical Operations Committee) of the **Packaging Institute**. Before his present appointment, Mr. Schaefer was chairman of the machinery div. of PI.

A four-year course in food technology, which prepares students for technical careers in frozen-food packaging and in other areas, has been initiated by the **University of Tennessee**. The university's food-technology school building is equipped with facilities for teaching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F.Y.I. [*Continued*]

the manufacture, processing, preservation and distribution of food. Additional information is available from the Dept. of Food Technology, College of Agriculture, University of Tennessee, Knoxville, Tenn.

Continental Can Co. last year awarded gifts to some 421 liberal-arts colleges in 32 states, as part of its continuing program of financial aid to American education. The gifts included grants, scholarships and scholastic materials.

Reynolds Metals Co. has published a study on boil-in-the-bag packaging. Called "Bagging Sales," the 22-page booklet traces the history of this packaging concept and surveys the future. The booklet is offered in a loose-leaf binder so supplements can be inserted later. It is available on letterhead request to Reynolds, Dept. PRD-29, Richmond 29, Va.

"Opportunities for Graduate Studies in Forest Products" is the title of an illustrated brochure published jointly by the **University of Wisconsin** and the **U. S. Forest Products Laboratory.** The brochure outlines a program offered by the university which will enable graduate students to fit their research into the framework of the laboratory's facilities. Copies of the brochure are available, without cost, from Prof. W. K. Neill of the University of Wisconsin or from Dr. Edward G. Locke, U.S. Forest Products Laboratory, Madison, Wis.

The **National Flexible Packaging Assn.** has compiled new commercial specifications for single-wall, flexographic-printed cellophane bags; gravure-printed cellophane roll products, and flexographic-printed cellophane roll products. The association has issued the specifications for approval by members before final ratification.

A new technical bulletin, "Extrusion of Film for Packaging," has been completed by **Eastman Chemical Products, Inc.,** sub. Eastman Kodak Co. The booklet, which summarizes commercial polyethylene-extrusion techniques, features results of studies to determine the effect of various conditions of extrusion on film properties, with particular application to Tenite polyethylene film extrusion. Copies of the new technical bulletin are available on request to the company at Kingsport, Tenn.

"Package Designing for the Supermarket" is the theme of a dual seminar being held simultaneously in the East and Midwest on May 10. Under the sponsorship of the **Package Designers Council,** the New York area meeting will be held in the Grand Union supermarket at Garden Plaza Shopping Center, Paramus, N. J. The Jewel Tea supermarket at 2235 N. Milwaukee Ave. will be the setting for the Chicago version of the event, the second of a series of on-location clinics originated by the council last year.

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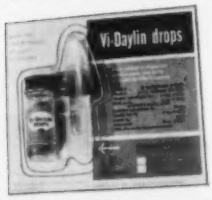

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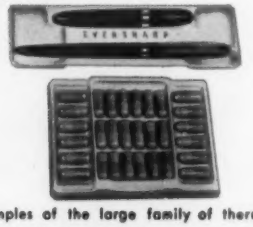
"Lock-fit" drawn transparent cover designed and manufactured for HELENE CURTIS, INC. Reinforcing ridges and pronged corners lock-fit cover firmly and safely in place.



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U. S. Patents Digest

This digest includes each month the more important patents of interest to packagers. Copies of patents are available from the U. S. Patent Office, Washington, D. C., at 25 cents each in currency, money order or certified check. Postage stamps are not accepted. Edited by H. A. Levey.

Jar-Cap Detector, Joseph R. Zazzara, Syracuse, N.Y. U.S. 2,913,547, Nov. 17. An attachment, for use in conjunction with automatic jar-filling apparatus, for detecting jars with improperly applied or absent covers, so that said jars can be removed from the packaging line; said attachment being capable of accommodating jars which may be of varying size dimensions.

Packaging Machine, Dean P. Selock (to Roto Wrap Machine Corp., Englewood, N.J.). U.S. 2,923,111, Feb. 2. In a machine for making individual filled bags, means for forming bag material into the form of a continuous strip having a closed botton and open top.

Machine for Filling and Closing Cartons, Charles B. Harker (to Bartelt Engineering Co., Rockford, Ill., a corporation of Illinois). U.S. 2,923,112, Feb. 2. In a machine for filling a carton, the combination of a carrier for supporting and advancing a series of cartons step by step along a predetermined path to present the cartons successively to a filling position.

Packaging Apparatus, Roland E. Miller and Raymond G. Rudnik (to National Dairy Products Corp., a corporation of Delaware). U.S. 2,923,114, Feb. 2. Apparatus for evacuating gases from paperboard cartons filled with wrapped cheese units, comprising a receptacle adapted to receive a plurality of the cheese-filled cartons arranged in abutting relation to each other.

Sealing Mechanism for Packaging Machines, Carl A. Frank, Hillsdale, and Joseph A. Lynch Washington Township, N.J. U. S. 2,923,115, Feb. 2. A packaging machine of the type which pulls a film of packaging material around the feeding tube of the machine to form a tube, fills the tube with a product and seals same at each end of the product to define a package.

Box and Method and Apparatus for the Manufacture Thereof, Robert Kent Schwebs (to Cornell Paperboard Products Co., Milwaukee, a corporation of Wisconsin). U.S. 2,923,211, Feb. 2. A method of manufacture of box elements of the character described, which method comprises providing a blank constituting in one integral piece series-connected box-side-wall panels and clamping band side-wall panels.

Display and Carrying Package for Merchandise, John F. Hagar (to Diamond National Corp., a corporation of Delaware). U.S. 2,923,401, Feb. 2. A display and carrying package for merchandise comprising in combination a paperboard stiffening element comprising a body panel, a handle element extending from said body panel at one end thereof.

Dispensing Container for Corrosive Liquids or the Like, James K. Baker (to West Virginia Pulp & Paper Co., New York, a corporation of Delaware). U.S. 2,923,402, Feb. 2. A dispensing container for battery electrolyte and the like, comprising a bottle having a body with a bottom, cylindrical sides, curved shoulders and a central neck defining a bottle mouth.

Container and Combined Cover and Pouring Spout, Milton H. Klausmann (to Seal-Spout Corp., Mountainside, N.J., a corporation of New Jersey). U.S. 2,923,445, Feb. 2. The combination of a paperboard container having a discharge opening in one wall thereof and a combined cover and spout including a body portion comprising solely a portion of said container wall that was cut from the container wall.

Container and Process for Sealing the Same, George E. Eckman (to American Can Co., New York, a corporation of New Jersey). U.S. 2,923,453, Feb. 2. A container comprising a body portion having a peripheral, inturned caret-shaped hem providing a peripheral, downwardly extending channel therein.

Reclosable Carton, Henry W. Pupke (to National Biscuit Co., New York, a corporation of New Jersey). U.S. 2,923,454, Feb. 2. A reclosable carton having body and end forming panels, one of said panels comprising two pairs of opposed flaps, with each flap being hingedly connected along one edge to a contiguous panel and formed to fold inward so that the flaps overlap.

Quick-Opening Pasted Multiwall Paper Bag, Maurice A. Ryan (to International Paper Co., New York, a corporation of New York). U.S. 2,923,456, Feb. 2. A quick-opening multiwall paper bag including a body portion and a bottom closure formed by inside and outside bottom flaps, each extending from the body portion.

Rip-String Heavy-Duty Paper Bag, George Gerard (to Jiffy Mfg. Co., Hillside, N.J., a corporation of Delaware). U.S. 2,923,457, Feb. 2. A bag construction comprising a double flattened tubular member and a stiff U-shaped strip folded over and enclosing one end of said flattened member.

Method of and Means for Packaging Articles, Arthur Rowlatt More (to H. W. Wallace & Co., Ltd., Croydon, England). U.S. 2,924,051, Feb. 9. Method of filling cartons, boxes and the like with articles, comprising assembling the articles in a horizontal line in contact with one another.

Box Setting-Up Machine, Allen H. Lloyd (to Tech-Art Inc., Milford, O., a corporation of Ohio). U.S. 2,924,156, Feb. 9. A machine for setting up a box from a knocked-down box blank that includes a bottom panel having side and end walls which are hingedly connected to its edges.

Adhesive-Bandage Envelope, Raymond M. Hoey (to The Kendall Co., Boston, a corporation of Massachusetts). U.S. 2,924,331, Feb. 9. A packaged adhesive bandage, comprising an adhesive bandage and an envelope therefor, said bandage including a backing strip.

Bundle-Loading Device, John K. Barto, Freeport, N.Y. U.S. 2,924,340, Feb. 9. A bundle-loading device comprising four like, rectangularly spaced, vertical corner posts and a pair of horizontal sideframe members, each of which is at a side of the loading device and is fixedly connected at its ends to the corner posts disposed at the same side.

Stacking Apparatus, Robert R. St. Jean and William H. Warman (to Worcester Automatic Machine Co., Worcester, Mass., a corporation of Massachusetts). U.S. 2,924,342, Feb. 9. A stacking apparatus for containers having hand holes in opposed walls, comprising a framework having an entrance end and an exit end.

Aerosol Dispensers and Like Pressurized Packages, Arthur J. Samuel (to Gulf Research & Development Co., Pittsburgh, a corporation of Delaware). U.S. 2,924,360, Feb. 9. An aerosol dispenser or like pressurized package, comprising a receptacle having a manually operated discharge valve at its top and an eduction passageway reaching into the angle between the side wall and bottom of the receptacle.

Molded Egg Carton, Henry A. Lord and Harold S. Crane (to Diamond National Corp., a corporation of Delaware). U.S. 2,924,367, Feb. 9. A molded-pulp egg carton comprising two rows of cup-like egg cells, a row of upstanding posts between said rows of cells, each of said posts having a discrete base and a top.

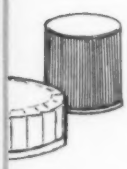
Metallic Receptacle, Donald L. Richter (to Kaiser Aluminum & Chemical Corp., Oakland, Calif., a corporation of Delaware). U. S. 2,924,369, Feb. 9. A light-metal foil receptacle including a flanged frusto-conical side wall and an integrally formed disk-like closed bottom, the improvement comprising inverted V-shaped integral reinforcement ribs formed in said receptacle bottom.

Carton, Cecil G. Lemon (to Unipak Carton Ltd., Vancouver, B.C., Canada). U.S. 2,924,370, Feb. 9. A blank for forming a multi-cell carton having portions constituting a pair of end walls and a pair of side walls, extensions on

[*Continued on page 175*]

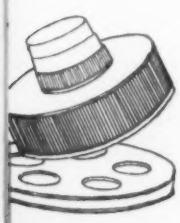
TEAR OUT AND SAVE

COLLAPSIBLE TUBES



PLASTIC CLOSURES

and SPECIALTIES



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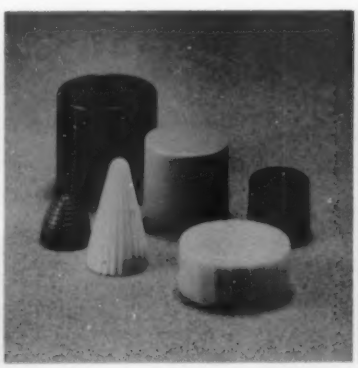

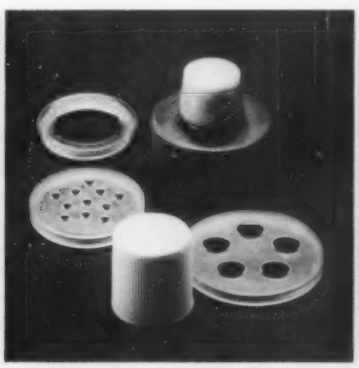

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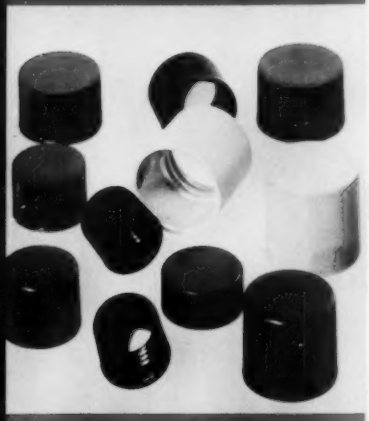
22 MM/400
24 MM/400
28 MM/400
33 MM/400
38 MM/400 (Plain or Well)
22 MM/414
24 MM/414



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20 MM/410 Fine Knurl
22 MM/410 Fine Knurl
38 MM/400 Fine Knurl
15 MM/415 Fine Knurl
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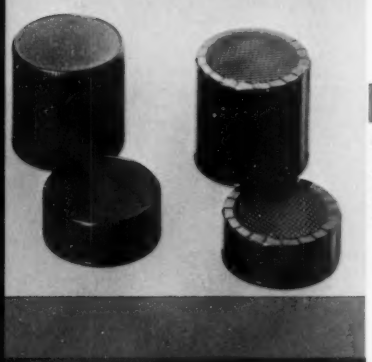
22 MM/415 Fine Knurl
24 MM/415 Fine Knurl



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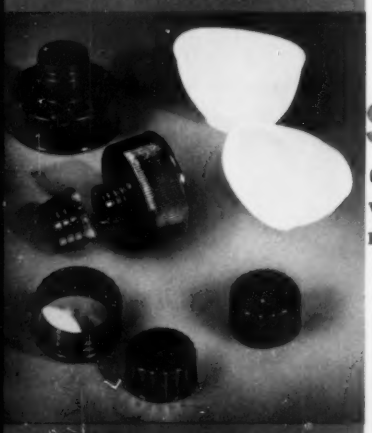

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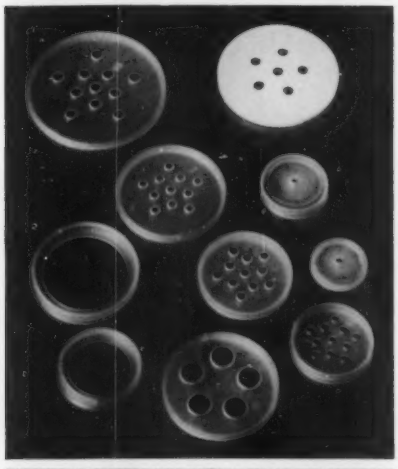
TRIPLE-THREAD CAPS FOR DENTIFRICE CANS, Etc.: 16 MM and 20 MM Sizes
POLYETHYLENE EYE CUPS: In a Variety of Soft Colors



SNAP-ON SIFTER AND LIQUID DISPENSING FITMENTS

Precision molded from polyethylene to snap on easily and fit tightly. The clear color makes them an attractive as well as useful part of the container. These are now being used on many nationally advertised products, and will prove a valuable asset to yours.

SNAP-ON POLYETHYLENE SHAKER TOPS

28 MM (11¼₄" Holes)	33 MM (11¼" Holes)	38 MM (5¼" Holes)
33 MM (11³⁄₃₂" Holes)	38 MM (11³⁄₃₂" Holes)	43 MM (6⅛" Holes)
43 MM (6³⁄₃₂" Holes)	48 MM (11⅞" Holes)	58 MM (11⅛" Holes)

STOCK POLYETHYLENE LIQUID DISPENSERS

20 MM/400, 410 or 415 Series — 24 MM/414 Series

24 MM/400, 410 or 415 Series

STOCK POLYETHYLENE POURING RINGS

28 MM/400, 410 or 415 Series — 38 MM/414 Series

STOCK COLLAPSIBLE TUBE CAPS

The Plastics Division of Wheeling Stamping is unexcelled for precision molding of Collapsible Tube Caps. These are available for immediate shipment, in any quantity, in the illustrated styles and sizes. Collapsible Tube Caps can also be custom-molded to your own brand identification. Write for design service information and price quotations.

No. 12 Round Knurl Ball or Flat Seat

No. 16 Standard Round Knurl Valve or Flat Seat

No. 16 Extra Heavy Round Knurl Valve or Flat Seat

No. 16 Spike Extra Heavy Round Knurl Flat Seat

No. 16 Round Mushroom Style Valve or Flat Seat

No. 20 Standard Round Knurl Flat Seat

No. 20 Extra Heavy Round Knurl Flat Seat

No. 28 Round Knurl Flat Seat

Quick Service on Custom-Molded Caps

Our Design and Engineering Departments are closely integrated to give you fast service on caps custom-molded for your tubes, or glass or plastic bottles. Once the design has received your approval, it is a short simple step to production and delivery to whatever point you specify, in whatever quantity you require.

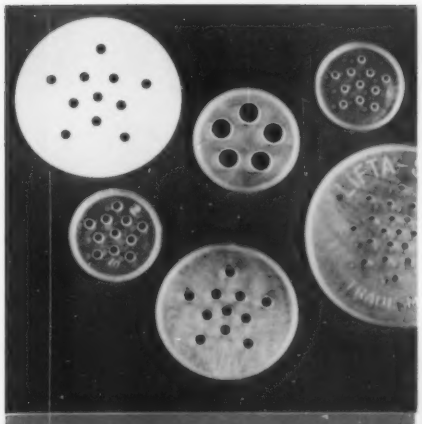
This Custom-Molded Cap Service is a prideful accomplishment of Wheeling and, whether you are redesigning an old product container or preparing to introduce a new product, it will prove of benefit to you. The fast Wheeling service applies equally on hard or soft plastics. Your inquiry is invited.

may we help you?

Wheeling has long been a leading manufacturer of metal collapsible tubes for packaging pastes, creams, adhesives, powders, paints, cosmetics, pharmaceuticals and other products. This Wheeling experience is available to you to help solve your packaging problems.

Since all products do not contain the same ingredients and are not compatible with all metals, our Laboratory will be pleased to run metal compatibility tests on your product and suggest the metal most suitable. These tests will also determine whether the tubes need an internal coating for absolute product protection.

WE INVITE YOU TO MAKE USE OF OUR ENGINEERING AND LABORATORY SERVICE. NO OBLIGATION, OF COURSE



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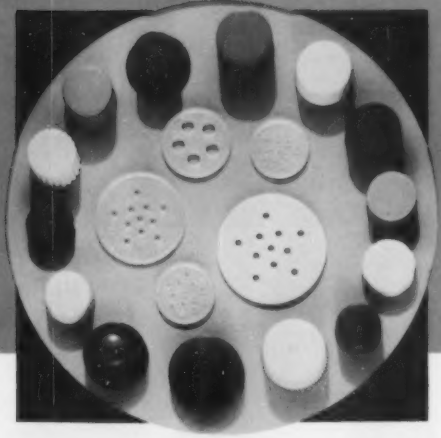

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COLLAPSIBLE TUBES

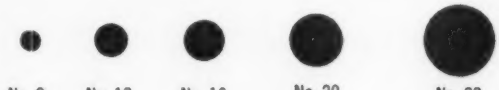
Wheeling Collapsible Tubes are made of tin, lead and aluminum, as well as tin-coated lead and tin-lead alloys. As the illustrations on this page depict, Wheeling Tubes are available in all sizes and neck types, and plain or with a decoration.

SEE THE FACING PAGE FOR OUR COMPLETE LINE OF ATTRACTIVE STOCK DESIGN TUBE CAPS.

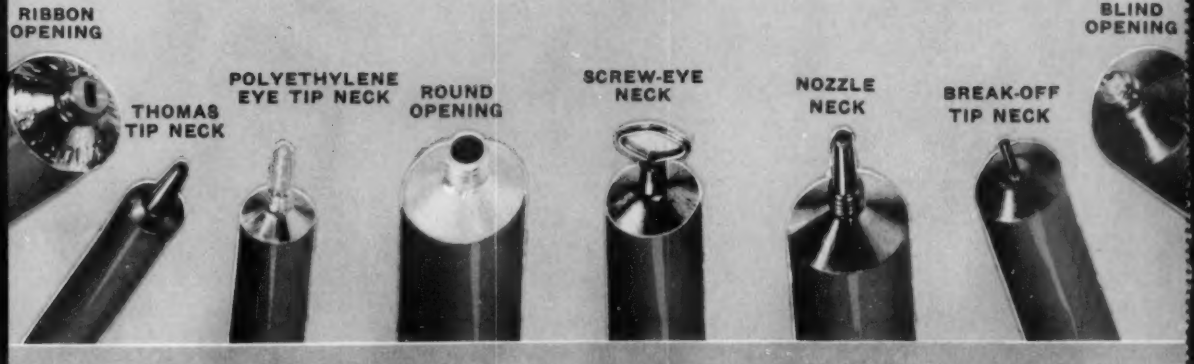
STANDARD TUBE SIZES AND CAPACITIES

DIAMETER X LENGTH	FLUID OUNCES	C. C.	DIAMETER X LENGTH	FLUID OUNCES	C. C.
3/8 x 2	3/4 dr.	2.77	1 x 5 1/2	2 oz. 0 dr.	59.15
1/2 x 2	1 1/2 dr.	5.54	1 x 6	2 oz. 2 dr.	66.54
1/2 x 2 1/2	1 3/4 dr.	6.47	1 1/8 x 4 1/2	1 oz. 6 dr.	51.75
1/2 x 3	2 dr.	7.39	1 1/8 x 5	2 oz. 0 dr.	59.15
1/2 x 4	2 3/4 dr.	10.17	1 1/8 x 5 1/2	2 oz. 2 dr.	66.54
5/8 x 3	3 dr.	11.09	1 1/8 x 6	2 oz. 4 dr.	73.93
5/8 x 3 1/2	3 1/2 dr.	12.94	1 1/4 x 4 1/2	2 oz. 0 dr.	59.15
5/8 x 4	4 dr.	14.79	1 1/4 x 5	2 oz. 3 dr.	70.24
3/4 x 3 1/2	5 dr.	18.48	1 1/4 x 5 1/2	2 oz. 6 dr.	81.33
3/4 x 4	6 dr.	22.18	1 1/4 x 6	3 oz. 1 dr.	92.42
7/8 x 3 1/2	7 dr.	25.88	1 3/8 x 5	3 oz. 0 dr.	88.72
7/8 x 4	1 oz. 0 dr.	29.57	1 3/8 x 5 1/2	3 oz. 4 dr.	103.51
7/8 x 4 1/2	1 oz. 1 dr.	33.27	1 3/8 x 6	4 oz. 0 dr.	118.29
1 x 4	1 oz. 2 dr.	36.97	1 1/2 x 6	4 oz. 4 dr.	133.08
1 x 4 1/2	1 oz. 4 dr.	44.36	1 1/2 x 6 1/2	5 oz. 0 dr.	147.87
1 x 5	1 oz. 6 dr.	51.75	1 1/2 x 7	5 oz. 4 dr.	162.65
			1 3/4 x 8	8 oz. 6 dr.	251.60

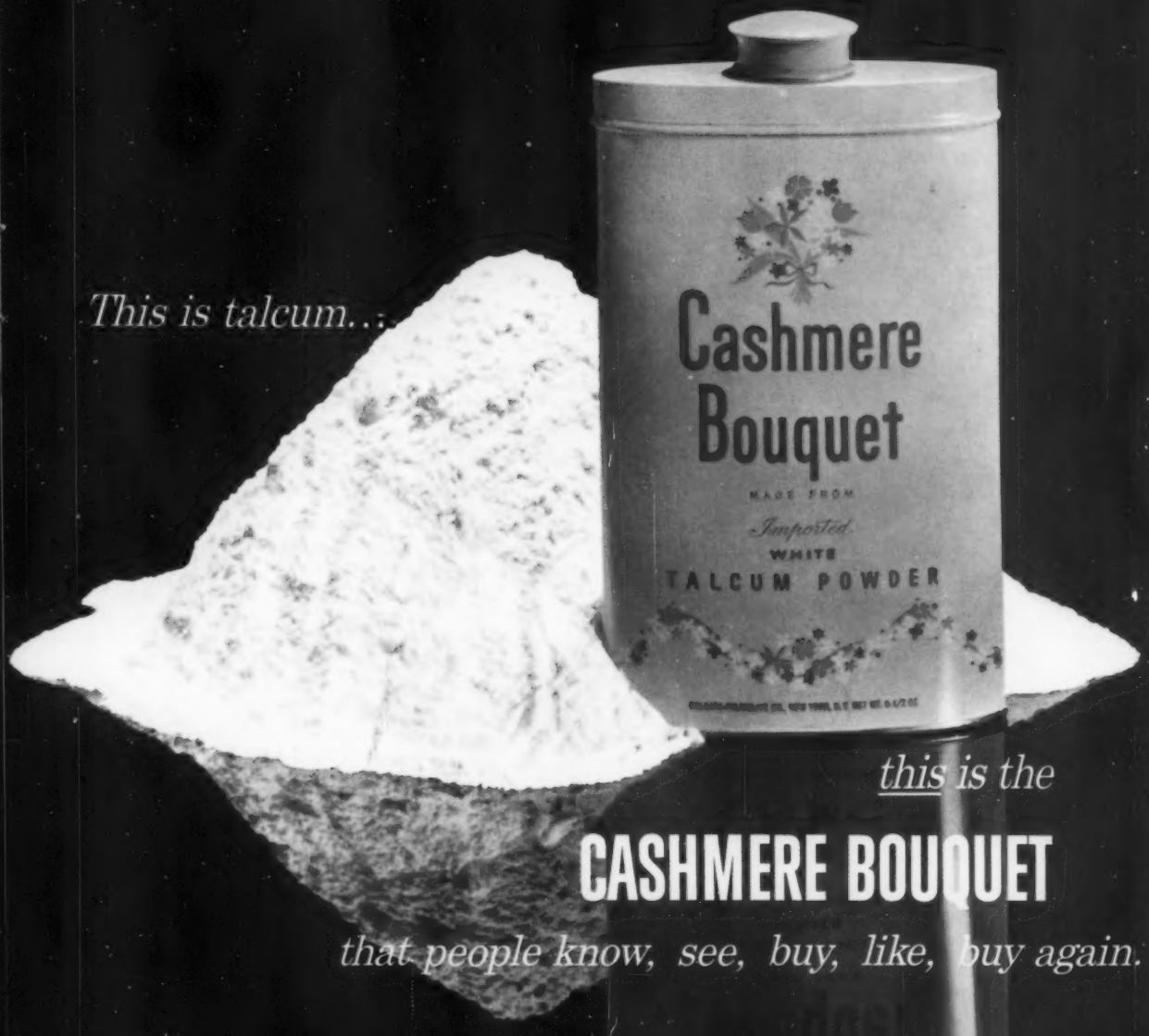
TUBE OPENINGS:



No. 8 1/8" | No. 12 3/16" | No. 16 1/4" | No. 20 5/16" | No. 28 7/16"



THERE IS A NECK TYPE FOR EVERY PRODUCT



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COLLAPSIBLE TUBES

Wheeling Collapsible Tubes are made of tin, lead and aluminum, as well as tin-coated lead and tin-lead alloys. As the illustrations on this page depict, Wheeling Tubes are available in all sizes and neck types, and plain or with a decoration.

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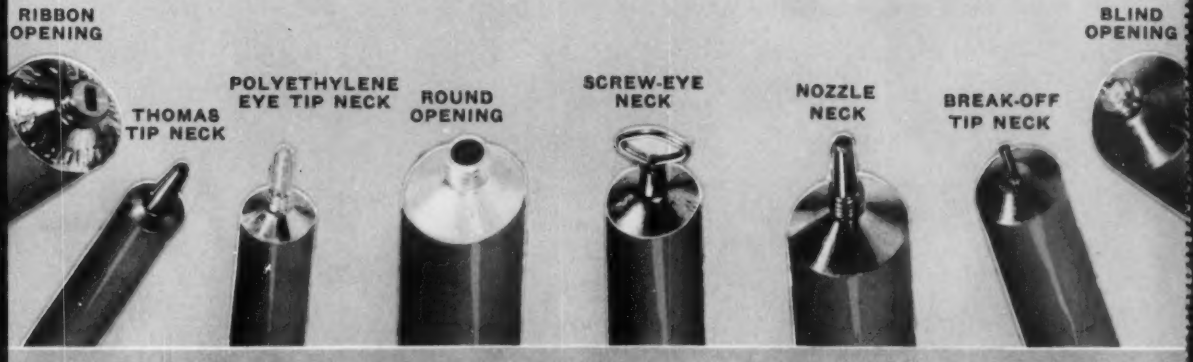

THERE IS A NECK TYPE FOR EVERY PRODUCT

Patents

[*Continued from page 168*]

corresponding edges of all of said walls, each of said extensions being foldable into bottom and partition sections.

Carton, William P. Frankenstein, Roselawn, O. U.S. 2,924,371, Feb. 9. A knocked-down carton of the class described, formed from a single blank comprising a bottom panel, a first extension integrally and hingedly connected to one side of the bottom panel and a second extension integrally, hingedly connected to the other side of the bottom panel.

Apparatus for Interleaving Bags Made of Thermoplastic Material, Walter M. MacEvoy, Lockport, N.Y. U.S. 2,924,454, Feb. 9. An apparatus for temporarily interleaving seals of heat-sealed bags as they are successively delivered from a bag-sealing machine to a take-off conveyor in shingled relationship.

Control Mechanism for Box-Making Machines, Charles O. Riker (to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware). U.S. 2,924,825, Feb. 16. A wirebound box-making machine of the type having conveyor bands for moving asssembled box parts past a transverse row of stapling units.

Apparatus for Use in Packaging of Product, Alexander H. Burnett (to Swift & Co., Chicago, a corporation of Illinois). U.S. 2,924,922, Feb. 16. A device for use in sealing an extending end of a plurality of partially formed packages under controlled atmosphere.

Machine for Packaging Ham, Orlando Garpolo and Edwin J. Robertson (to Wilson & Co., Chicago, a corporation of Delaware). U.S. 2,924,924, Feb. 16. An apparatus for forming an airtight package, comprising an airtight cabinet adapted to hold an open-ended bag containing an article to be packaged.

Method for Erecting Boxes, Howard D. Willett (to Crown Zellerbach Corp., San Francisco, a corporation of Nevada). U.S. 2,925,020, Feb. 16. The method of erecting a container blank scored and slotted to define opposed pairs of side and end walls, including a connecting flap hinged to a wall.

Method and Apparatus for Making Can Bodies, Clarence J. Smith and Peter Bogner (to W. E. and John Barnes Co., Rockford, Ill., a corporation of Illinois). U.S. 2,925,059, Feb. 16. An apparatus for forming can bodies, comprising means for continuously conveying a plurality of blanks successively along a predetermined path of travel.

Dispensing Container, Frank A. Senger (to Ortho Pharmaceutical Corp., a corporation of New Jersey). U.S. 2,925,100, Feb. 16. A cylindrical container suitable for storing a plurality of applicators and a pharmaceutical composition, fitted with a top cover having a central circular opening.

Apparatus for Opening and Unloading Cartons, Michael Candido, Jr., (to Chas. Pfizer & Co., Inc., New York, a corporation of Delaware). U.S. 2,925,185, Feb. 16. An apparatus for opening the bottom flaps of inverted cartons filled with articles and for unloading said articles, said apparatus comprising a first conveyor including a pair of

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Readable, attractive marking made by Markem machines on your boxes or labels helps them from the moment they're marked to the time they're used — and can even help future sales as well. Good marking speeds handling . . . reduces waste and packing errors . . . allows quick selection by customers . . . simplifies and encourages reordering . . . carries the "quality" message of modern package design.

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Patents [*Continued*]

parallel side walls spaced apart a distance substantially equal to the width of said cartons.

Cellular Partition Releasably Locked in a Compartmented Shipping Container, Paul Wasyluka (to Crown Zellerbach Corp., San Francisco, a corporation of Nevada). U.S. 2,925,209, Feb. 16. A beverage-carrying tray with at least two integrated, rigid, two-piece, six-cell side-by-side units releasably locked therein, the tray having a bottom wall and connected, opposed pairs of upstanding walls.

Heavy-Duty Container for Bulk Material, Clifford D. Fallert (to Crown Zellerbach Corp., San Francisco, a corporation of Nevada). U.S. 2,925,210, Feb. 16. A collapsible, siftproof rectangular paperboard container free of external projections, for storing and shipping materials in powder, pellet, granular and other flowable forms, wherein said materials are effectively protected from contamination by contact with exposed raw edges of board.

Box With Manually Releasable Latch Mechanism, Richard F. Welsh, Jr. (to E. I. du Pont de Nemours & Co., Wilmington, Del., a corporation of Delaware). U.S. 2,925,212, Feb. 16. In a box having a lid with a flap, the flap of which in closed position tucks down behind the front wall of the box, a releasable latch mechanism comprising an inwardly movable tongue in said front wall formed by a suitably shaped cut in the wall.

Polygonal Paperboard Boxes, Arthur W. Zukoski (to Alton Box Board Co., Alton, Ill., a corporation of Delaware). U.S. 2,925,213, Feb. 16. In a paperboard box of the character referred to, having top and bottom panels and a plurality of integrally hinged side walls, the improvement that comprises said side walls being hinged alternately to the top and bottom panels, the side walls lying at a similar obtuse angle.

Mechanism for Tying Packages and the Like, Frederick William Mosey (to Seal-Less Strapping Ltd., London, England). U.S. 2,925,698, Feb. 23. A mechanism for tying packages or the like with flexible binding material which is fed from a supply.

Device for Intucking the Mouths of Paper Bags, Louis Ozor, San Francisco. U.S. 2,925,699, Feb. 23. In a bag-intucking device, a frame, means related to the frame to hold the bag in position, a movable head on the frame reciprocable toward and away from said bag, and a fixed head between said bag and said movable head.

Refrigerating Package, Albert A. Robbins and Clifford A. Linn (to Kwik-Kold of America, Inc., Las Vegas, Nev., a corporation of Nevada). U.S. 2,925,719, Feb. 23. A refrigerating package comprising: a sealed outer envelope formed of flexible, fluid-tight sheet material; a refrigerating chemical disposed within said outer envelope, and a sealed water-containing inner envelope disposed within said outer envelope.

Method of Forming Container, Allen B. Wilson (to Acme Steel Co., Chicago, a corporation of Illinois). U.S. 2,925,-

FIRST

in production-line POLY-PACKAGING

Two new products from Carolina Paper Mills, Inc.

The AMSCOMATIC® METHOD

Of automatically producing a tight-to-product edge-sealed poly package

- **Produces strong, straight, clean-cut edge seal closures and simultaneously removes and disposes the skirts or lips beyond the edge seals.**
- **Three types of infeed conveyors to efficiently handle rigid or soft products or a combination of both...automatically.**

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- **Automatic Ticketer/Labeler** (for pricing, stock numbering, code-dating and private brand merchandising.)

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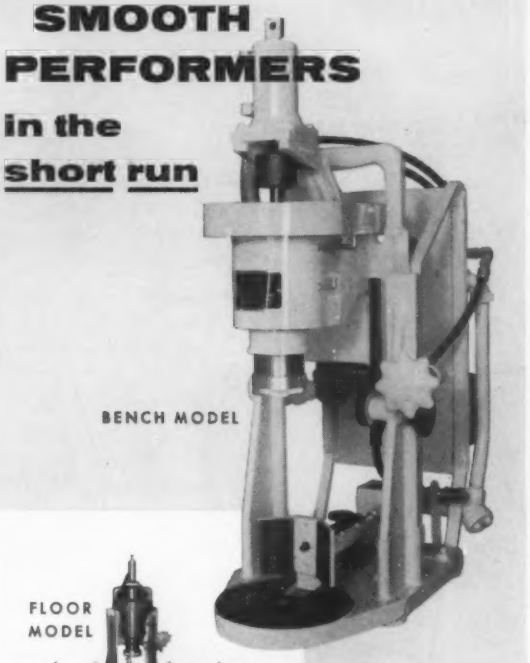
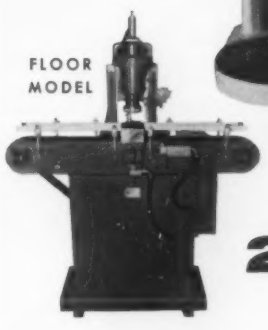
SMOOTH PERFORMERS in the short run



BENCH MODEL



FLOOR MODEL

2 OF A KIND FOR CAP TIGHTENING

Each of these Unicappers—bench or floor—requires the assist of one operator who feeds the container, with the cap loosely placed on, in position to be automatically tightened to uniform tension. The tightening chuck is driven down to contact the closure by air cylinder action. Both machines handle screw or lug type turn-on caps and container sizes up to 7" in diameter. Adjustable to height range from 2" to 10". Adjustable tension, quick, easy change-over from one size to another.

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Patents [*Continued*]

757, Feb. 23. The method of forming a container which comprises the steps of forming an upstanding wall for the container, forming a metal rim having a body portion of a size to fit an end of the wall and having a hollow bead curved substantially circularly through an arc of approximately 270 deg., whereby the free edge of the bead faces the body portion of said rim.

Apparatus for Forming Cartons or Containers, Jacques Robert Beetz (to Alium, S.A., Brussels, Belgium). U.S. 2,925,758, Feb. 23. An apparatus for the manufacture of thin-wall polygonal containers, comprising a matrix including a resiliently supported blank holder, the shape of which corresponds to that of the bottom of the finished container.

Can-Closing Machine, Willy H. Diezel and John George, Jr. (to The Max Ams Machine Co., Bridgeport, Conn., a corporation of New York). U.S. 2,925,797, Feb. 23. A machine for closing irregularly shaped cans having major and minor transverse diameters, comprising a can-holding rotor having a peripheral semi-pocket of an internal shape conforming approximately to the shape of substantial external side portions of such a can, and an unseamed cover.

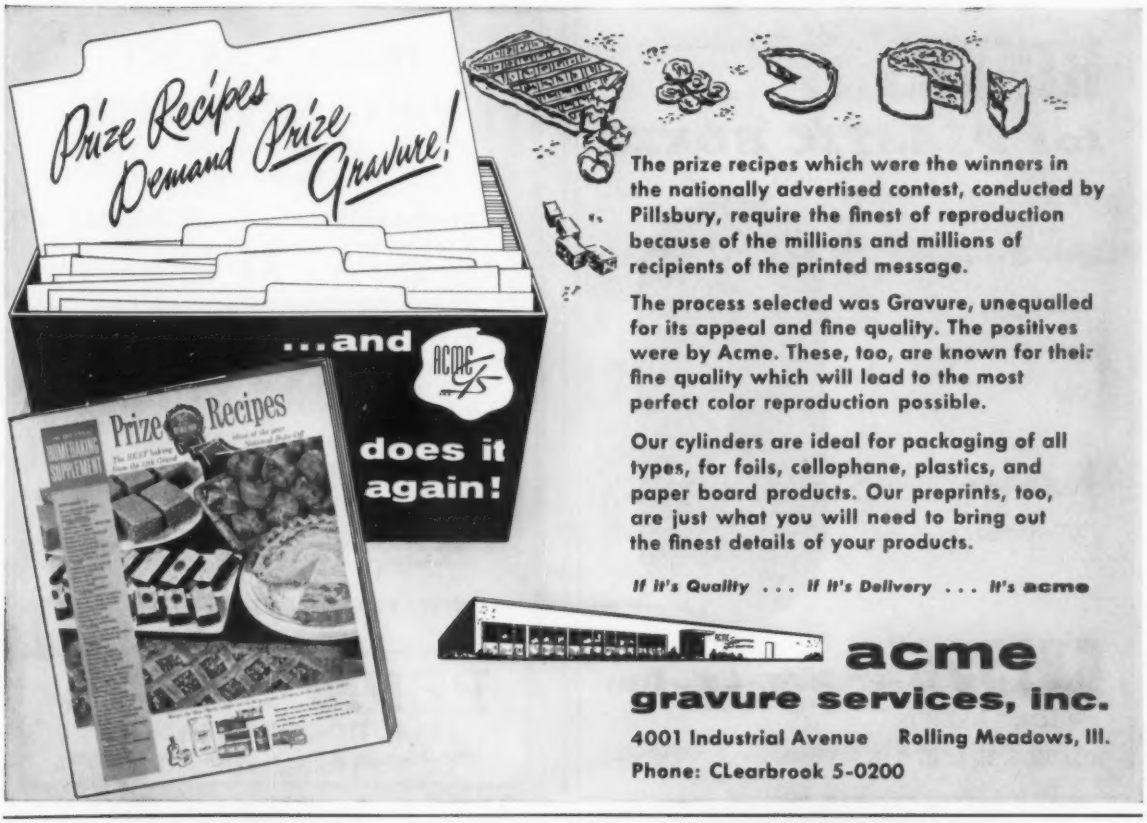
Apparatus for Applying Surface Coatings to Glassware, Paul E. Bivens and Earl F. Schaefer (to Owens-Illinois Glass Co., Toledo, a corporation of Ohio). U.S. 2,925,801, Feb. 23. Apparatus for applying a surface treatment to only the outer surface of open-mouth glass containers, which comprises a continuously advancing conveyor for supporting and advancing containers in transversely aligned rows.

Labeling Machine for Applying Wrap-Around Labels, Sidney T. Carter (to Geo. J. Meyer Mfg. Co., Cudaho, Wis., a corporation of Wisconsin). U.S. 2,925,931, Feb. 23. A labeling machine of the kind wherein a bottle to be labeled is moved uninterruptedly along a predetermined article path.

Tube Container Having a Screw Cap With a Cord, Atsushi Nomura, Tokyo, Japan. U.S. 2,925,935, Feb. 23. Means for connecting a screw cap to a collapsible-wall container to prevent inadvertent loss thereof, said screw cap having a cylindrical periphery and a screw-threaded bore in one end thereof.

Liquid-Dispensing Container and Blank Therefor, Carroll R. Alden (to Ex-Cell-O Corp., Detroit, a corporation of Michigan). U.S. 2,925,948, Feb. 23. In a tubular container of sheet material, a panel structure comprising in combination a side panel defining a side wall of the container and an inner end panel extending across one end of said container and having an edge portion extending along and secured to the adjacent end edge of said side panel.

Paper Bag With Integral Locking Tabs, John Davis (to Equitable Paper Bag Co., Inc., Long Island City, a corporation of New York). U.S. 2,925,951, Feb. 23. A paper bag having front and back panels and a flap panel formed by an extension of the material of the front panel in the direction of the length of the bag beyond a fold line at which the flap joins the front panel.



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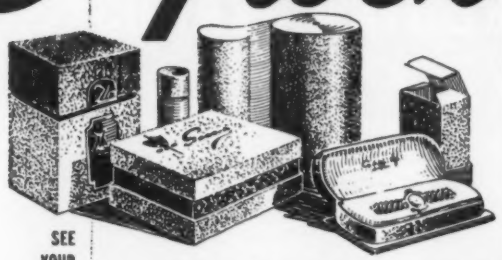
CLAREMONT Flock



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Flock-Affixed Papers ...IN ROLLS
Boxboard ...IN SHEETS
(18 brilliant colors)

—Claremont Flock . . . those tiny clipped-lengths of luxurious cotton and regal rayon. We market this irresistible outer raiment in bulk to paper processers, product manufacturers, packaging specialists and display builders who, for dramatic enrichment, apply it to paper, glass, metal, cork, plaster and similar materials.

Flock is a fascinating stimulant—and for pennies, an ounce adds a pound of allure. Check your suppliers—or, for complete information, feel free to contact us direct.

CLAREMONT FLOCK CORPORATION
The Country's Largest Manufacturer of FLOCK
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HAMMER BRAND
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SPECIALLY WAXED SINGLE PLY and LAMINATED GLASSINE for HEAT SEALING UNIT PAKS

GLASSINE & GREASEPROOF for CONVERTERS

GLASSINE and GREASEPROOF for BOARD LINING
Protects AROMA • FLAVOR • FRESHNESS

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COLORS
WHITE
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for—
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83 Years of Quality and Service
THE HAMERSLEY MFG. CO.
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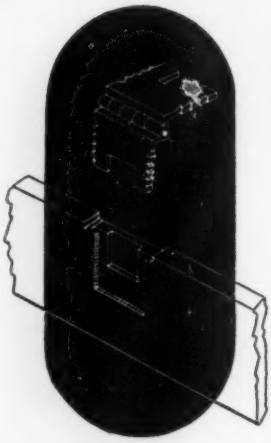
HINGES...
for PLASTIC BOXES

press-fit assembly
(Holds like
a drive-screw)
with
or without
double action
"C" Springs



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TRANSPARENT VINYL ENVELOPES

in gauges from .004
. . . for a hundred and one uses

PERMANENT **RE-USABLE**

A QUICK PACKAGING SOLUTION for Slippers, Stockings, Gloves, Sweaters, Scarves, Cosmetics, Handkerchiefs, Sewing items, Lingerie, Novelties and Accessories, etc.

PLUS . . .

PROTECTION • EASE OF HANDLING • ADVANTAGE OF DISPLAY • POINT OF PURCHASE ATTRACTION • AS PREMIUM WITH ITEM

This simple merchandiser can be hole-punched, snap-fastened and produced in any size, any quantity.

FOR DETAILS, send specifications desired, on company letterhead.

VINYL PACKAGING DIVISION

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PLASTIC CORPORATION
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Improve **ROLL QUALITY**
Reduce **MATERIAL WASTE**
Increase **PRODUCTION**
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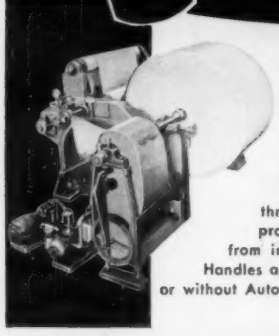
COMPLETE RANGE OF SIZES & TYPES FOR EVERY PROBLEM, PURPOSE, PROCESS . . . Automatic, Semi-Automatic, or Manual Braking . . . Shaft or Shaftless . . . Manual or Constant Tension, with or without Web Guide.



CONSTANT TENSION UNWIND STANDS
Maintains Perfect Linear and Side Register. Provides constant tension throughout any web processing operation from in-feed to re-wind. Handles any size roll. With or without Automatic Web Guide.

HEAVY DUTY UNWIND & REWINDS
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REWIND Available with or without drive equipment, readily adaptable to any process application.

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LOW COST UNWIND where Light Duty Equipment is required. Manual Braking and side lay adjustment included. Web Guiding optional.

Let us know the material you run, roll diameter, maximum roll wt., web width. Without obligation we'll tell you the right Stanford Unwind/Rewind Unit for your operation. Write today.

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Manufacturers of Slitters, Web Guides, Rewinding and Constant Tension Equipment

use this page to develop an idea in 60 seconds

The Polaroid Land camera has had phenomenal sales success. It is expertly designed . . . the materials and workmanship are the best. Now, even the package is something special. The camera and accessories are cushioned in a seat of DYLITE® expandable polystyrene.

DYLITE's unique combination of properties—lightweight, shock resistance and easy moldability to any contour—make it the ideal choice for the variety of platforms and inserts used in Polaroid packages.

Additional properties of strength, water resistance and insulation have made DYLITE a leading choice of package designers in a wide variety of industries. Chances are it can make an excellent improvement in *your* package.

(60 seconds are up. Did you get an idea? Write to Koppers Company, Inc., Plastics Division, Pittsburgh 19, Pennsylvania.)

Offices in Principal Cities • In Canada: Dominion Anilines and Chemicals Ltd., Toronto, Ontario

KOPPERS PLASTICS

DYLENE® polystyrene, SUPER DYLAN® polyethylene and DYLAN® polyethylene are other fine plastics produced by Koppers Company, Inc.

LPNA competition sets record with 294 awards

A record-breaking number of 294 winners was selected for awards in the recent 10th Anniversary Lithographic Awards Competition & Exhibit, sponsored by the Lithographers & Printers National Assn. The winning specimens were selected from 2,541 entries in 49 classification ranging over the entire field of printed matter as the finest lithography produced in the United States and Canada in 1959.

Certificates of Award were presented to representatives of the winning firms at an Awards Dinner on April 25 at LPNA's 55th Annual Convention at the Boca Raton Hotel & Club, Boca Raton, Fla. Presentations were made by LPNA President L. E. Oswald and Howard C. Minnich of Diamond National's U. S. Printing & Lithograph Div., chairman of the LPNA Promotion Committee. This year's Awards Catalog, one of the largest in the history of the competition, was distributed for the first time at the Awards Dinner.

Winning specimens will be shown at the New York Exhibit, May 17-20, at the Warwick Hotel; the Chicago Exhibit, June 7-10, will be at the Hamilton Hotel.

LPNA winners in the packaging categories are as follows:

Labels: Libby's labels, Libby, McNeill & Libby, by Schmidt Lithograph Co.; Han-Dee housewares labels, Victory Mfg. Co., by Philipp Lithographing Co.; Land O'Lakes canned vegetable labels, Oconomowoc Canning Co., by U. S. Printing & Lithograph Div. of Diamond National Corp.; Mott's PM Drink, Duffy Mott Co., by Hammer Lithograph Corp.; King Whiskey label, Brown-Forman Distillers Corp., by Courier-Journal Lithographing Co.; Four Roses Antique label set, Four Roses Distilling Co., Inc., by Consolidated Lithographing Corp.

Wrappers: Royal Treasure, Barth & Dreyfuss, by H. S. Crocker Co., Inc.; Loft's Crest Collection, Loft Candy Co., by Smith-Edwards Co.; Bridal Box wrap, Barth & Dreyfuss, by Western Lithograph Co.; Decorative Ensemble, Barth & Dreyfuss, by H. S. Crocker Co., Inc.; Decorative Ensemble box wrap, Barth & Dreyfuss, by Western Lithograph Co.; Kitchen Classics, Barth & Dreyfuss, by H. S. Crocker Co., Inc.

Cartons: ADC Drop, Merck Sharp & Dohme, by C. A. Sauter Co., Inc.; Ophthalmic Solutions, Merck Sharp & Dohme, by C. A. Sauter Co., Inc.; Saran Wrap Ready Roll 15, Dow Chemical Co., by Container Corp. of America; Lipton Soup carton, Thomas J. Lipton, Inc., by Federal Carton Co. and Rochester Folding Box Co.; Belair 20/200 carton, Brown & Williamson Tobacco Co., by U. S. Printing & Lithograph Div. of Diamond National Corp.; Pink Ribbon Drene carton, The Procter & Gamble Co., by U. S. Printing & Lithograph Div. of Diamond National Corp.

Miscellaneous Packaging Material —Inserts, All-Over Papers, Tags, Seals, Etc.: Life album cover, *Life* magazine, by Futura Lithographic Corp.; Archer hosiery inserts, Archer Hosiery Mill, by Commercial Printers, Inc.; Sister Rosetta Tharpe, Synthetic Plastics, Inc., by Queens Lithographing Corp.; British Band Classics, Mercury Record Corp., by Photopress, Inc.; Corina Father's Day plastic box inserts, General Cigar Co., Inc., by Consoli-

THE ONLY UNITIZED SLIDE BED BELT CONVEYORS IN WIDTHS from 1 to 48"!

All-Purpose conveyors that grow with your needs. All components are standardized allowing conveyors to be lengthened or shortened as the need requires. A full range of widths, plus standardized parts, permits complete flexibility within your plant.

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Unitized STANDARD UNIT

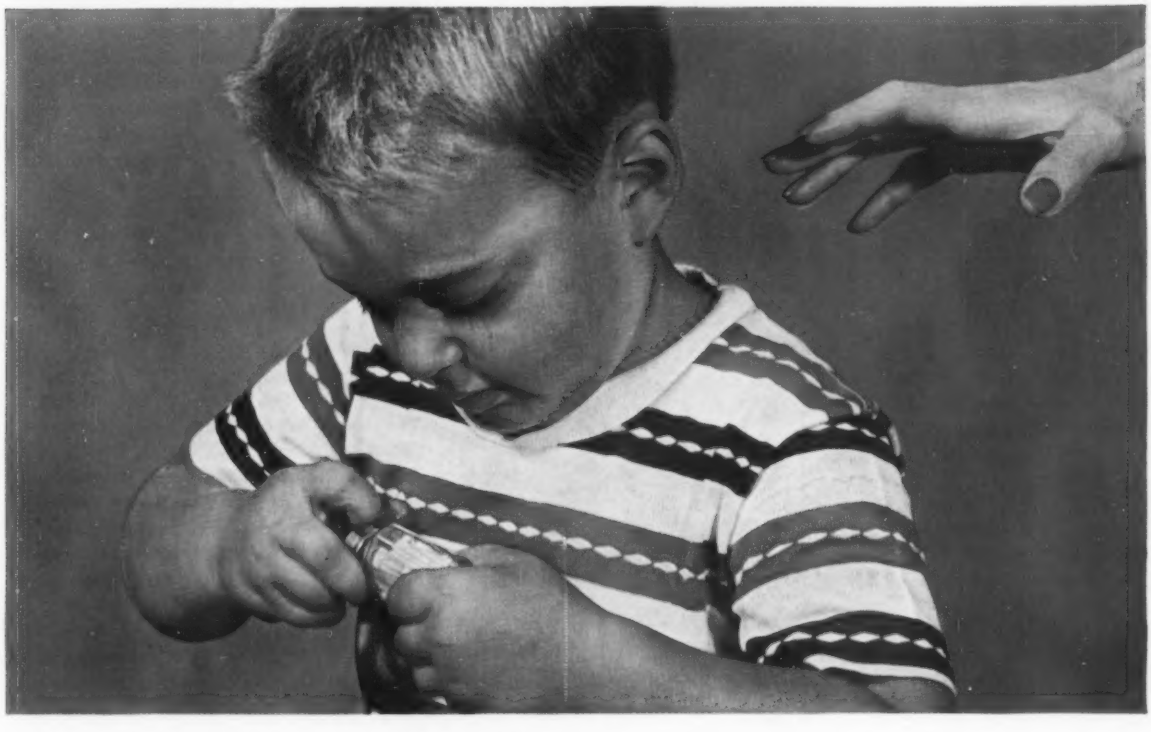
The perfect mechanized table for assembly, inspection and packaging operations. Movable or stationary—available in steel or stainless steel with fixed or variable speed. 8", 12", 16", 18", 24", 30", 36", and 48" widths.

Unitized NARROW BELT UNIT

A versatile, low-cost unit for conveying lightweight articles for assembling, inspecting or packaging operations. Easy to install — economical to operate. 1", 2", 3", 4", 5", and 6" widths.

Grownups *flick* them off...

snap them on...



Packaging tackles a safety problem

Children find it harder to remove Owens-Illinois safety 'snap-caps'

Why was it Owens-Illinois who designed the safety snap-cap?

Because we are a *packaging* company, not merely a maker of closures.

Both by viewpoint and by facilities, we're equipped to tackle a problem like this from many aspects. We work with a variety of materials—glass, paper and metal, as well as plastics. We know their characteristics and how to get the most out of them. We combine the talents of many specialists.

As a result, we specialize in just one thing—solving your *packaging* problems.

METAL AND PLASTIC CLOSURES
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO
PACIFIC COAST HEADQUARTERS • SAN FRANCISCO

dated Lithographing Corp.; One Step Beyond, Decca Records, by Niagara Lithograph Co.

Labels and Wrappers—Other Processes: Armour labels, Armour & Co., by Milprint, Inc.; Candy Cupboard Miniatures, New England Confectionery Co., by Snyder & Black & Schlegel; Calvert Gin foil-label set, The Calvert Distilling Co., Inc., by Consolidated Lithographing Corp.; Calvert Reserve Christmas pre-wrap, The Calvert Distilling Co., Inc., by Consolidated Lithographing Corp.; Schrafft's Peanut Butter Blossoms, Vanilla Fudge, Caramallows, W. F. Schrafft & Sons Corp., by Milprint, Inc.; Date-A-Lite Penetray wrapper, Penetray Corp., Sub. of Save Electric Corp., by U. S. Printing & Lithograph Div. of Diamond National Corp.

Counter Merchandisers and Displays: Revlon Glitter De Luxe, Revlon, Inc., by Einson-Freeman Co.; football counter card, Carling Brewing Co., by Merrick Lithograph Co.

Floor Merchandisers, Spectaculars and Island Displays: Purina Dog Chow—And How!, Ralston-Purina Co., by Inland-Magill Weinsheimer; Cool & Fresh display, Pillsbury Co., by Ketterlinus Lithographic Mfg.; Jell-O Holiday pole display, General Foods Corp., by Snyder & Black & Schlegel; Belair super spectacular, Brown & Williamson Tobacco Corp., by Einson-Freeman Co., Inc.; Kleenex Table Servers display, Kimberly Clark, by Inland Lithograph Co.

Combination Displays (more than one process): "Easy Riding," Shell Oil Co., by Industrial Lithographic Co., Inc.; Ansco Camera promotion display, Ansco—Div. of General Aniline & Film Corp., by Sweeney Lithograph Co., sub. of Federal Paper Board Co., Inc.; Dream Whip bin, General Foods Corp., by Snyder & Black & Schlegel; Canadian Club Native Porter floor stand, Hiram Walker, Inc., by Consolidated Lithographing Corp.; Spree bin and riser, Colgate Palmolive Co., by Brett Lithographing, sub., U. S. Printing & Lithograph.

Metal Lithography: Renoir design, Atlantic Can Co., by Metal Litho Corp.; Z.B.T. Baby Powder tin, Sterling Drug, Inc., by Continental Can Co., Inc.; DX Boron Ultra Special motor oil, DX Sunray Oil Co., by American Can Co.; Wintry Lane, Olive Can Co., by Caspers Tin Plate Co. ●

Standard's marketing approach to packaging pays off... in many unusual ways

How to make the FDA happy

"Chicken and glue don't mix," says the FDA. And they're very opinionated about it. That's why Standard's *Bradley-Gilbert Division* made the first chicken parts box that has all the glue permanently confined to the *outside*. In addition, the box has a unique snap-lock that locks fast at just a touch. Has double-strength ends that won't buckle under heaviest stacking conditions. And it's easier and faster to fill. The cost? No more than Swift's (and others) paid for old-style boxes.

Ingenuity solves drippy problem

The theory that customers have a right to "Buy their cake and eat it, too" led Goodman American of Chicago to consult Standard about packaging its ice cream and cake sandwich. The drip problem was tidily solved by enclosing the sandwich in a heavy foil wrapper, using the same principle applied in making milk bottle hoods. Once opened, the pack becomes a "bowl". Consumer may use spoon, or eat by hand, peeling package away as he progresses.

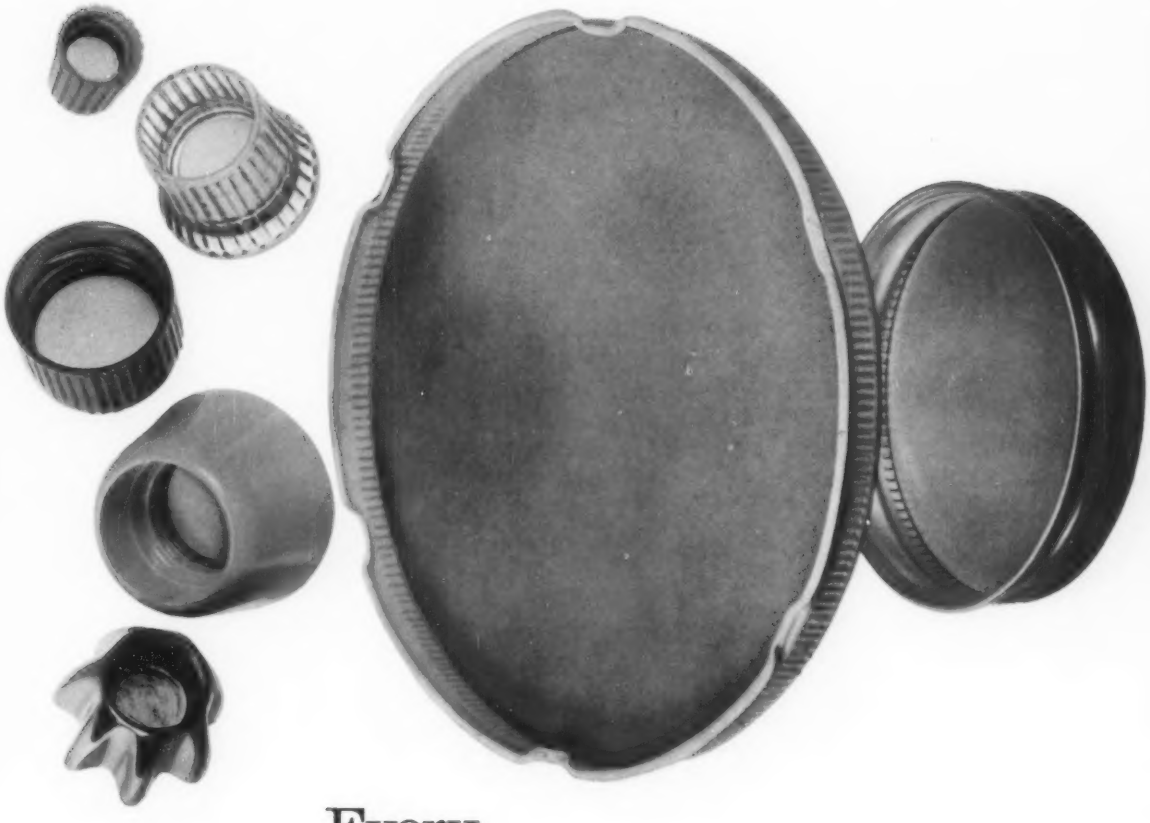
Vacuum-packaging switches food sales from cool to hot

The XLNT Spanish Foods Company wanted to build a fire under its enchiladas business. Standard's *Flexible Packaging Division* recommended they switch from cello over-wrap to vacuum-packaging, using Standard's 6-12 Flex-Vac machine. Result? Consumer sales are up 30 percent. Furthermore, the store-life of XLNT Enchiladas has nearly tripled. Formerly 8 days, it's now 3 weeks! And nothing's been changed but the package.

FILM • FOIL • PAPER AND BOARD PACKAGING • PAPER PLATES • CUPS • BOWLS AND TRAYS • FINE PRINTING AND BUSINESS PAPERS • PAPERBOARD AND PULP STOCK

ALL FROM ONE COMPLETELY INTEGRATED, CONVENIENT SOURCE:

STANDARD PACKAGING CORPORATION



Every major closure manufacturer uses cap liners by Standard Packaging

"Goods returned because of leakage." • This complaint from consumers and dealers once cost the food, drug, cosmetic, toiletry, and liquor industries millions of dollars a year. Now, that loss has been all but eliminated. And Standard Packaging played a major role, by creating cap liners that are airtight, leakproof, and impervious to oil, alcohol, acids and other chemicals • That's why practically *every* closure liner used in America today is made by Standard Packaging. And when better liners are made, they'll very likely be the result of Standard's research • Is there any phase of *your* packaging that might be improved – by new thinking or new materials? Perhaps Standard can be of help.

STANDARD PACKAGING CORPORATION · Executive Offices: 200 East 42nd Street, New York 17, New York

Canco's 'Operation Tall Can'

Mailing of its 1959 annual report to stockholders in a spiral-wound paperboard can with metal ends and a string pull opening similar to those used for ready-to-bake biscuit dough—one of the company's own products—is a unique "first" for American Can Co.

Spiral-wound, metal-end can with pull string, used by American Can Co. for mailing 1959 annual report to its stockholders, is similar to the company's biscuit-dough container.

Eight months of planning went into this unusual mailing, called "Operation Tall Can," which was undertaken (1) to focus attention on the company's emphasis on research and new-product development, (2) to generate interest among customers in a new container, (3) to improve communications with stockholders by use of a unique mailing and (4) to help call attention to the 150th anniversary of the invention of the can.

The Bankers Trust Co. of New York, transfer agent for American Can, cooperated closely with the company in "Operation Tall Can." Packaging production was set up in the bank's offices at 485 Lexington Ave., New York. Two lines were placed in operation, with 10 American Can employees imported from one of its New York area plants to handle machinery for inserting reports and sealing the cans. During the seven days of the packaging operation, output reached a rate of more than one report every 2 seconds.

The paperboard can body is spirally wound of four plies, with inner and outer layers of foil. The overwrap of aluminum foil mounted on kraft backing paper is rotogravure printed in six colors, plus a coat of varnish. A pressure-sensitive mailing label completes the package.

SUPPLIES AND SERVICES: Cans by American Can's Canco Div., Arlington, Tex., plant. Overwrap by American Can's Marathan Div., Menasha, Wis. ●

F&DA snowed under with requests

Action by the Food & Drug Administration on packaging chemicals not yet ruled upon under the Food Additives Amendment to the Food, Drug & Cosmetic Act may now be further slowed by a new backlog of more than 1,100 requests for test extensions of direct flavor additives, says Einar T. Wulfsberg, officer in charge of F&DA clearance work. A bright spot, however, is the full approval of an important petition for polypropylene by F&DA as this issue went to press.

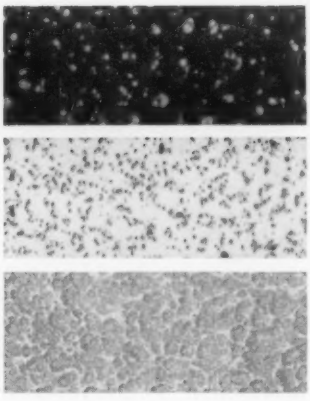
However, the pile-up at F&DA may affect action on petitions for more widely used materials such as cellophane and polyethylene, which were among 642 food additives involved in packaging that F&DA by March 10 had approved, recognized as safe or temporarily extended for use.* While only a few packaging chemicals still lack one of these F&DA designations, Mr. Wulfsberg reports, rulings on the packaging-test requests may string out for another month or two.

Meanwhile, so far as can be learned, no important packaging material has been banned from use. This unofficial moratorium appears likely to continue for some time.

Last-minute work on all test extensions has also seriously hampered F&DA efforts to post final decisions on many other food additives and packaging materials. Government technical men have not had time yet even to read some lengthy data submitted before the Amendment's March 6 deadline. Manufacturers hope these data will lead to positive clearance of certain packaging components under the "generally recognized as safe" category.

Clearance of the long-standing polypropylene petition, submitted by Hercules Powder Co., may have an important bearing on future petitions for other packaging resins

*See "Food Crisis Put Off," MODERN PACKAGING, April, 1960, special insert.



The container brings home the product personality

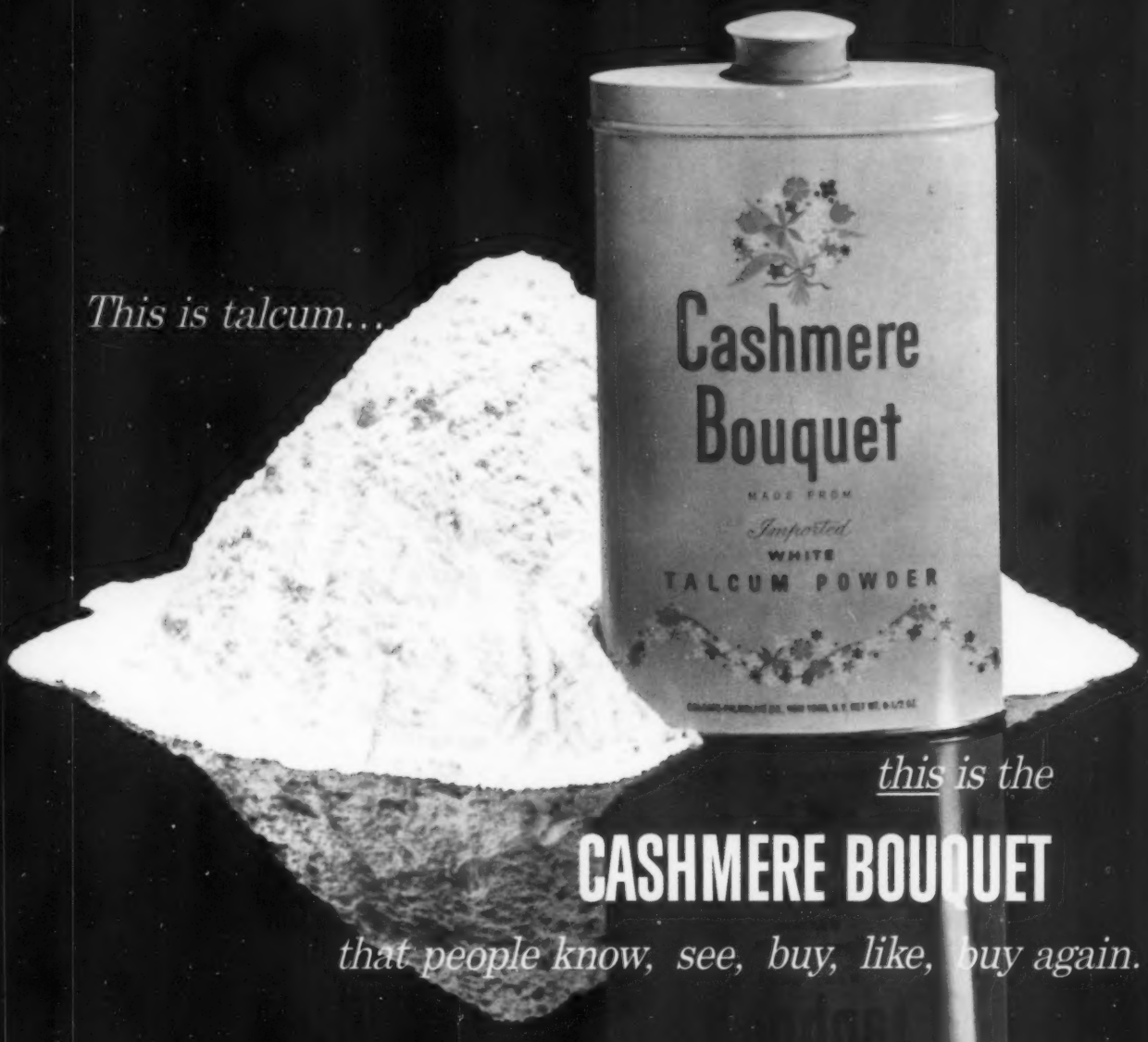
The distinctive tailored container of Cashmere Bouquet is "right" for the product. Your product, too, may heighten individuality through a combination of container design, color or texture.

Lithographed finishes, recently developed by Clark, offer new techniques for creating highly individual container design.

Clark's Tectone finishes in textured, eggshell, marbleized and hammered antique effects are ideal for food, drug, cosmetic and specialty products. Still other exciting and unusual finishes are in process. These lithographed textures provide "sales personality" for a variety of container styles, help create the individuality essential to competitive marketing.

We'd like to give you full information on these and other new container developments at Clark. One may meet your particular needs. If you will cite your container problems, we will send samples—or suggest that you talk with one of our qualified representatives.

J. L. CLARK MANUFACTURING CO., Rockford, Ill.; Liberty Division Plant and Sales, Lancaster, Pa.; New York Sales Office, Chrysler Bldg., N. Y. 17



this is the

CASHMERE BOUQUET

that people know, see, buy, like, buy again.

MARKETED IN LITHOGRAPHED METAL CONTAINERS CUSTOM STYLED AND MANUFACTURED BY

J. L. CLARK

General Mills uses

SEAL-SPOUTS

for perfect packaging

General Mills, as a final step to perfection in packaging their new PROTEIN PLUS hot oat cereal, added SEAL-SPOUTS for

EASIER OPENING
EASIER POURING
EASIER STORING

For a plus value, Seal-Spouts have established consumer acceptance and preference for aluminum pouring spouts.
And for production economy, Seal-Spouts are automatically applied to the package right in the production line.
If you package free-flowing products, Seal-Spouts will help you sell them.

SEAL SPOUT Corp.

MOUNTAINSIDE, NEW JERSEY

and films, since it establishes a unique principle of "clearance by specification." Described in the petition as a "crystalline polypropylene," this food-grade resin is reportedly now fully usable in films, injection-molded and extruded containers that come into direct contact with food products.

As for polyethylene and cellophane, data in petitions covering these films are now being evaluated for completeness. If the petitions are published, these two important packaging materials will have passed the first hurdle toward complete approval. F&DA then has 90 days in which to study the facts submitted and either (1) clear these films for general use or (2) establish tolerances for food applications. Need for petitions on cellophane arises from new chemical formulations used in the basic film, as well as from coatings. ●

More aid for MSU

Latest contributions from industry to the Michigan State University's School of Packaging Foundation $2,000,000 building fund include cash donations as well as donations of materials required to construct the new School of Packaging building.

Newest cash contributors include General Motors Corp., $15,000; Packaging Machinery Mfrs. Institute, $10,000; Copperweld Steel Co., $100; Riley & Geehr, $100, and National Steel Container Corp., $100. The PMMI contribution, earmarked for purchase of research and development equipment, is part of a continuing program to support education in the packaging field from funds provided by income from the Institute's Shows.

Building materials contributed by various companies include 306 tons of structural steel, 24 tons of steel joists, 130 tons of reinforced steel, 2,770 cu. yds. of concrete, 36,000 sq. ft. of gypsum roof deck, 36,000 sq. ft. of roof insulation, 360 squares of roofing, 80,000 exterior bricks, 24,000 sq. ft. of aluminum curtain wall, 16,500 sq. ft. of plate glass, 8,000 sq. ft. of porcelain enamel or anodized aluminum panels and 6,400 sq. ft. of aluminum sun-shade screen.

Gordon Fromm, vice president-production, International Latex Co., recently accepted membership on the Foundation's Board of Trustees. ●

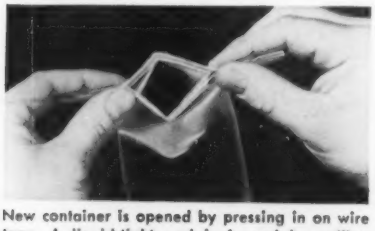
U.S.I. POLYETHYLENE NEWS

A series of advertisements for plastics and packaging executives by the makers of PETROTHENE® polyethylene resins

MAY, 1960 — U. S. Industrial Chemicals Co., Division of National Distillers and Chemical Corporation — 99 Park Ave., N. Y. 16, N. Y.

Packaging Notes

A low-cost sterile polyethylene bag with a wire closure is now being used by the dairy industry for milk sampling and is reportedly finding application in a number of markets including frozen foods and cosmetics. In dairy use, the bags are said to reduce sampling costs up to 50% through replacement of bulky glass containers and elimination of washing, sterilizing and breakage.



New container is opened by pressing in on wire tape. A liquid-tight seal is formed by pulling tape taut, rolling top of bag and folding wire ends together.

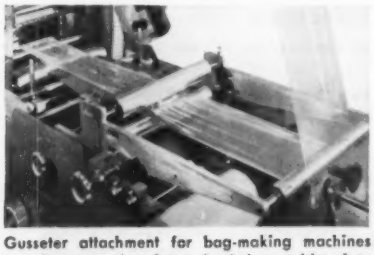
The containers are made of clear, heavy polyethylene tubing, sealed at both top and bottom to keep the inside sterile. A line of perforations is provided for removing the sealed top. Below the perforations are two wires which make it possible to open or shut the bag without touching the sterile opening. The bag is resealed with the aid of the wires, which are bent to form a liquid-tight closure.

A newly introduced gusseting attachment for polyethylene bag-making machines now permits converting flat polyethylene tubing into gusseted tubing without the use of an air bubble.

The new unit permits printing and perforating of flat tubing before gusseting. Among the advantages claimed for this method of converting are improved printing quality, the possibility of printing on one half of the gussets of seamless bags, and placement of perforations within the gussets—without impairing the printed face of bags.

It is also reported that the unit eliminates telescoping rolls and overcomes any tendency of the film to block. Fewer roll changes are necessary, too, because flat tubing gives more footage than gusseted tubing on the same diameter roll. Attendant problems of winding up gusseted rolls are avoided.

The manufacturer reportedly offers complete gusseter kits for any model of polyethylene bag-making machine.



Gusseter attachment for bag-making machines permits converting flat polyethylene tubing into gusseted tubing without the use of an air bubble.

New U.S.I. Resin Produces Film With High Strength, Superior Appearance

Tailored for Produce Bags, New General Purpose Resin to Find Other Uses Where Combined Gloss, Clarity, and Strength Are Needed

The U.S.I. Polymer Service Laboratory has developed a new film-grade resin for producing polyethylene film with maximum clarity and gloss in combination with high impact strength. While the new resin—designated PETROTHENE 112—is tailored for the produce bag market, it should also find application in many other markets where combined gloss, clarity, and strength are desirable film properties.

Melt Index, gms/10 min.	3.0
Density, gms/cu. cm.	.921
Transmittance, %	65
Gloss, %	12
Haze, %	5
Dart Drop gm./F50	210
Draw Down, ft/min	330

Except for drawdown, properties of PETROTHENE 112 were determined on 1.5-mil blown tubing extruded at 330° F. stock temperature on 1½" MPM with 20/1 L/D ratio.

Special synthesis conditions during manufacture give the new resin outstanding flow properties which permit rapid extrusion of film. High drawdown rate of the resin makes it possible to extrude PETROTHENE 112 into thin gauge film without hot snap-offs. In preliminary tests, heat sealability of films made of the new resin was shown to be good under a wide variety of heat and pressure conditions. Treatment of the film for printability has also been accomplished with good results at commercial haul-off rates.

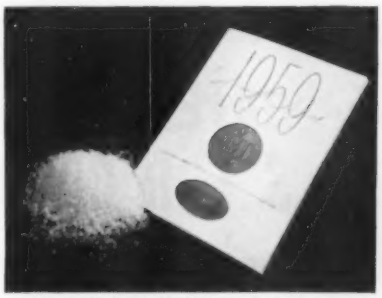
Recommended Extrusion Conditions

For peak gloss and clarity, PETROTHENE 112 should be extruded at about 330° F. stock temperature with a minimum blow ratio greater than 2 to 1.

PETROTHENE 112 is available in low-, medium- and high-slip formulations and in the no-slip form. A technical data sheet on this new resin may be obtained by writing to the Technical Literature Dept., U.S. Industrial Chemicals Co., or any of U.S.I.'s sales offices.

National Distillers' Annual Report is Polyethylene Coated

Cover stock for National Distillers and Chemical Corporation's recently issued 1959 Annual Report is extrusion coated with a protective layer of polyethylene. Advantages of using the polyethylene coating include durability, high gloss finish, and protection of the cover against tearing and soiling. The polyethylene coating also adds to the attractive appearance of the report.



National Distillers' 1959 Annual Report is the Company's third annual report to have a polyethylene coated cover. Pellets of PETROTHENE 203-2 polyethylene resin, the coating resin used, are also shown.

In producing the cover, ten-point cover stock was first gravure printed. The printed roll was then extrusion-coated with PETROTHENE 203-2 resin.

The sheeted covers were next printed on the reverse side by letterpress with rubber plates, then the cover was embossed and stamped with gold leaf.

National Distillers and Chemical Corporation has successfully used tough, clear polyethylene coatings for its annual report for the last three years. The company foresees a growing use of polyethylene coating for publication covers, both for the feeling of quality they impart as well as for their durability.

High Greaseproofness Feature of New Coating Resin

U.S.I. has introduced a new polyethylene coating resin which reaches 100% passage of Military Specification MIL-B-121B for greaseproofness at a lower coating weight than other resins of similar melt index and density. The new resin—PETROTHENE 205-15 with a density of 0.924 and a melt index of 3.0—has excellent adhesion with a wide variety of porous and non-porous substrates.

The flow characteristics of PETROTHENE 205-15 are well suited for high-speed extrusion coating. Coatings as thin as 0.5-mil can easily be applied. Neck-in, which results in costly trim loss, is reduced to a minimum. Polymer build-up at the die is virtually eliminated. According to U.S.I. Polymer Service Laboratories, maximum polyethylene to substrate bond strength is achieved at melt temperatures of 575° F. and higher.

PETROTHENE 205-15 is unique in that it offers the wide heat-sealing range normally associated with a low-density resin, combined with high greaseproofness usually associated with higher density resins. A technical data sheet on this new coating resin may be obtained by writing to the Technical Literature Dept., U. S. Industrial Chemicals Co.

exceptional moisture and grease resistance

POLYETHYLENE-COATED KRAFT OPENS UP NEW OPPORTUNITIES FOR CORRUGATED BOARD

Corrugated board made with polyethylene-coated kraft liner is extending the usefulness of corrugated into many new packaging applications.

This unique container board combines the strength of conventional corrugated with the exceptional grease and moisture resistance of polyethylene.

Polyethylene-coated corrugated has a glossy, non-abrasive liner surface that will not scratch or mar package contents.

Investigate polyethylene-coated corrugated board for applications like these:

Bulk shipment of meat, where moisture and grease-proof interiors reduce weight loss of the meat and keep moisture from weakening the carton.

Shipment of furniture and other hard goods, where abrasion damage from the container has been a problem.

Bulk bakery and confectionery shipments, where absence of grease-wickage makes containers suitable for reuse as point-of-sale displays.

In concrete construction forms, where the polyethylene coating acts as a release agent.

For the names of manufacturers now producing polyethylene-coated corrugated board, write to U.S.I.

Extruders and packagers can get these additional advantages from corrugated board coated with U.S.I. PETROTHENE® polyethylene resins:

NO ODOR—an important consideration in many packaging applications.

EXCELLENT ADHESION—with minimum hot melt oxidation.

HIGH PRODUCTION RATES—PETROTHENE resins have good drawdown properties, permit extrusion at high speeds.

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in principal cities

Sounding Board

[*Continued from page 64*]

aging lies in paper and plastics or a combination of same with some metals, based upon successful use so far and plans now formulated.

An increasing use is that of cellophane, plastic and/or foil wrappings which are growing by leaps and bounds for hundreds of items because of the visibility, cleanliness and convenience afforded.

Not to be overlooked is the switch from wood shipping containers to the use of paperboard cartons because of their lightness, ease of handling and saving in cost.

A greatly improved waterproof paper and carton are used for field packs of fruits and vegetables, and for refrigerated items.

Dwight Brown, *Vice President and Treasurer, J. C. McCullough's Seed Co., Cincinnati:* The great development and advances made with polyethylene material are probably the most important over-all change in packaging in the last decade. This is because of the very desirable attributes of the material relative to sales appeal and cost considerations.

In our industry, which is mainly grass seed, I believe this to be true also. The use of polyethylene bags has grown greatly in recent years. They are especially adaptable for sacking less-expensive grass seed which is sold widely in self-service, mass-marketing outlets such as supermarkets and dime stores. The advantages of these polyethylene sacks are these: they create more attractive sales displays, the printed information is better received by the viewers, they are less expensive and preferred by mass distributors.

In recent years, grass and flower-seed sales have increased markedly, partly due to packaging.

L. Y. Reed, *Manager, Lubricating Oil & Grease Mfg. Plant, Canadian Oil Companies, Ltd., Montreal:* In 1952, the Petroleum Packaging

Committee of the Packaging Institute, of which I am a member, adopted a new package, the 120-lb. full open-head drum for gear oils and greases. This package was a replacement of the 100-lb. container which

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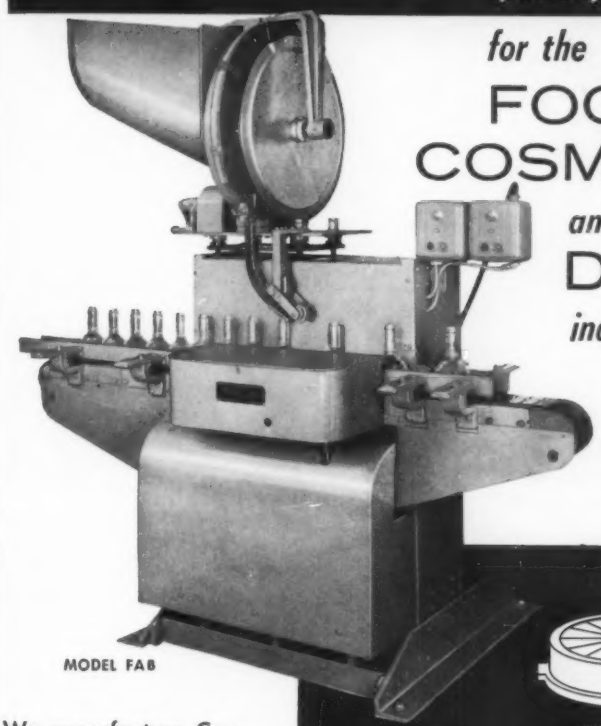
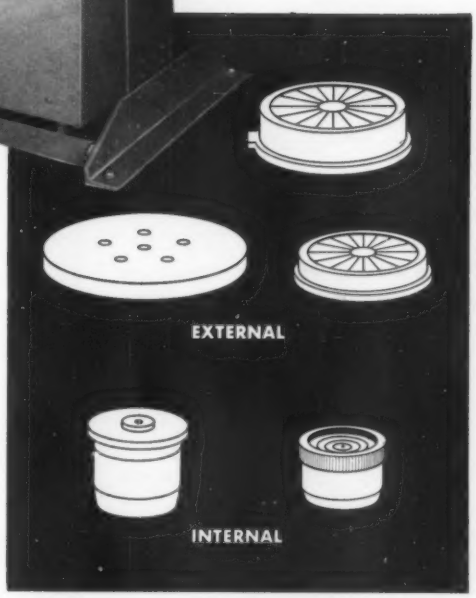
fully automatic FITMENT APPLICATOR *specially designed*

for the FOOD, COSMETIC *and* DRUG *industries*



MODEL FA8



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We manufacture Capping machines for every type of fitment... solid or perforated with or without tabs for exterior or interior use.

Capacity from 20 to 120 fitments and up to 300 per minute depending on fitment and container.

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Consult a RESINA packaging and sealing specialist regarding your special problem.

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IMS SILICONE
FLUID SPRAY

Anywhere Any Packaging Material Tends to Stick . . .

IMS SILICONE SPRAY will cut your scrap and stoppage rate—Save You Money! Try it on your packaging line—you'll see why almost overnight this amazing anti-stick material has become a necessity in the modern high-speed packaging field!

PRICES: $ 2.00 Per Sample Can
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Still lower prices on larger orders shipped in one gross lots on any schedule you request.

Delivered FREE Anywhere in the U. S. A.

INJECTION MOLDERS
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had only an 8-in. opening in the head and which was sealed by a gasket and four bolts. There was the odd company in the industry that used 100-lb. drums with full open head; most used the small opening.

When this new container was first introduced to the heads of the oil companies, they had about six reasons for not wanting to use it:

1. It was too heavy to handle.
2. The dispensing equipment in service stations couldn't handle it.
3. A number of bulk plants had steel shelving to hold the 100-lb. drum and changing was going to be fairly costly.
4. Salesmen said it wouldn't sell.
5. Equipment would have to be changed in filling plants.
6. They would not be able to palletize as many.

Only a couple of the large companies in the United States adopted this package but, for the next three or four years after 1952, there were a number of other oil companies that adopted this package and, at the last meeting I attended of the Petroleum Packaging Committee, you could count on your hands the number of oil companies in the United States and Canada that had not adopted it. We did not adopt it in our company until 1956, but the saving on this particular package has been tremendous:

1. The diameter of the 120-lb. drum is exactly the same as the old 100-lb.; the additional capacity is in the height.
2. You are still able to palletize nine drums on a 4-by-4-ft. pallet.
3. The cost is just slightly higher than the 100-lb. container.
4. It holds one-fifth more product.
5. The drum is a full open top and very easy to clean.
6. The lid of this container is crimped on with a pneumatic crimping tool, a faster operation.
7. The oil companies, upon investigation, found that for a very slight cost the service-station dispensing equipment could be converted.
8. The service-station personnel found this package more convenient.
9. It only takes a few extra seconds to fill the extra 20 lbs. and all other operations are the same, so you are throwing away money if you still use 100-lb. drums.

Last, but not least, our company finds that we have increased sales with this new-style package. ●

8 "BIG"
ADVANTAGES
OF
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PLASTIC
CONTAINERS

Crystal-clear for better product display at points-of sale . . . for better "eye appeal" to step up the buying urge. Here are Lusteroid's added plus values .

- PRODUCT PROTECTION — *no glass hazards*
- LESS PACKAGING COSTS — *low unit cost*
- REDUCED LABELING EXPENSE — *print right on Lusteroid*
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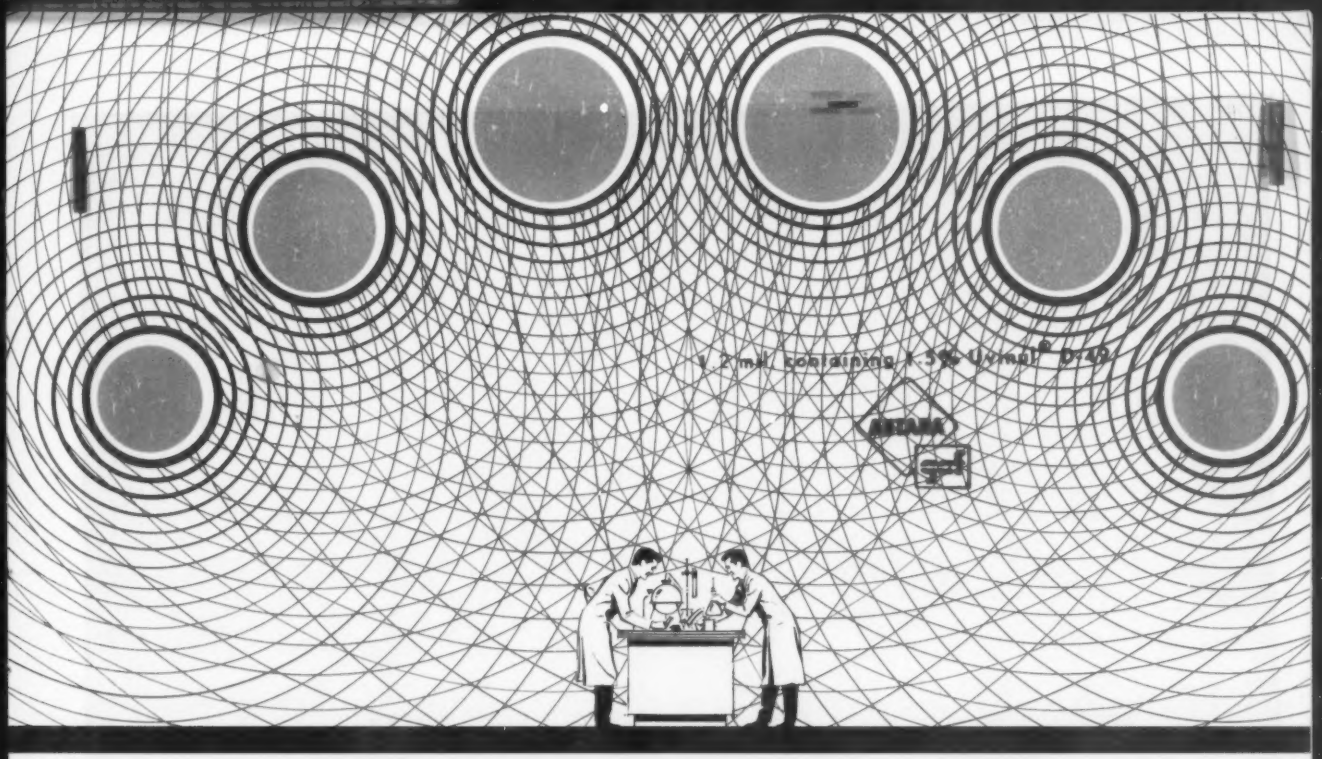

TEST

THE PROTECTION OF

UVINUL®

ULTRAVIOLET LIGHT ABSORBERS

The attached acetate sheet contains Uvinul D-49. Make your own test to demonstrate the positive protection afforded by Uvinul ultraviolet absorbers.

This test consists of —

1. Exposing your product to ultraviolet radiation while a portion of it is protected by the filter sheet, and

2. subsequently noting the superior condition of the protected portion.

Advantage of the test is that it can be set up in less than 10 minutes — no complications of formulation are involved.

FILTER TECHNIQUE: Cover a portion of the surface of your product with the filter sheet and expose the whole surface to ultraviolet radiation (from sun, sunlamp, Weather-Ometer, Fade-Ometer, etc.) long enough to produce deterioration of the unprotected surface. After exposure, compare the protected and unprotected portions, respectively. To prepare a liquid for this test, pour equal portions into two identical, clear glass bottles and wrap one bottle with the filter sheet.

The UVINUL stabilizers currently on the market offer the widest choice of solubility and absorption characteristics available anywhere. Moreover, to extend protection against ultraviolet degradation to as many materials as possible, Antara is constantly developing new UVINUL products. • Additional UVINUL filter sheets, samples, literature and technical assistance are available to you on request. Let us help you prolong the life of your product.

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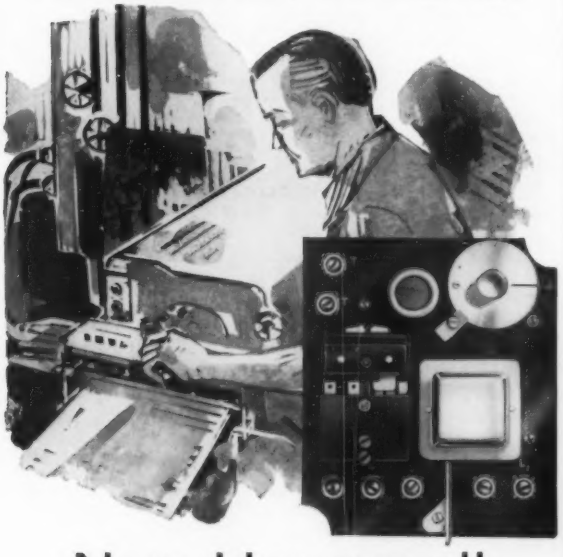

New Honeywell VERSA-TRAN*

Precisely controls temperatures to assure a perfect package every time!

Honeywell's new, low cost Versa-Tran is designed to be used in any packaging process where heat must be precisely and uniformly applied. Its low-mass sensing element reacts instantly to the slightest variation in temperature—assures the exact temperature for each packaging operation. You'll speed production, cut rejects, get a perfect package every time!

And this new temperature controller is always ready to go to work. Its unique transistor circuitry needs no warm-up period. It's more flexible, too, because it uses very small, low-voltage wiring.

Other Honeywell Versa-Trans are available to provide precise fill-level control for liquids, accurate humidity control for printing, and close pressure control where the product is weighed on a pressure-sensitive plate or enclosed in a pressurized can.

For details about the Honeywell Versa-Tran that will meet your specific packaging requirements, call your local Honeywell office. Or write Honeywell, Dept. MG-5-36, Minneapolis 8, Minn. In Canada, Honeywell Controls Ltd., Toronto 17, Canada.

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Honeywell

First in Control

SINCE 1885

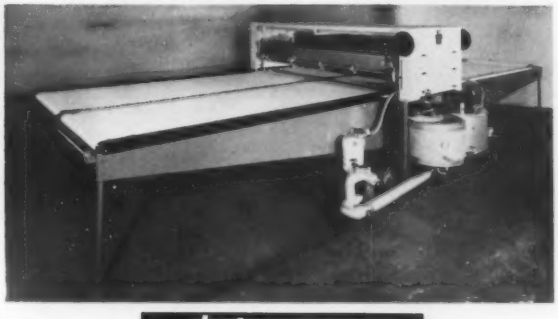
75th YEAR LEADING THE FUTURE

See us in Sweet's 1960 Product Design File, Section 5b-Min

NOT THIS

BUT THIS

WITH THIS!



Steinemann

Pressure Curtain Coater

End "valley flooding" and "hill starving" in coating corrugated board. The Steinemann coater avoids the roll coat disadvantages that squeeze material into depressions, and rob elevations. With Steinemann boards move through a uniform, thin curtain of coating which conforms to the surface smoothly—even with scored, slit, and die-cut stock! Color or clear coat, solvent or water-base can be run at speeds up to 800 feet per minute.

Hot Melts, Too!

Tell the difference at a glance by the gloss —it's Steinemann-applied! Waxes, paraffins, polyethylenes aren't roll-squeezed in—same coating weight as with roll coater gives better protection and appearance.

Smaller converters can color, clear and wax coat on one two-head machine. Steinemann costs no more than your present equipment—yet does so much more.

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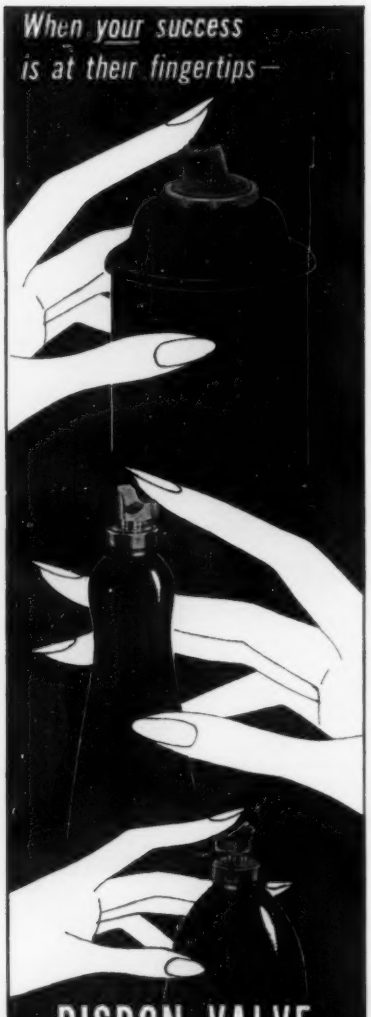

RISDON VALVE QUALITY IS VITAL INSURANCE

Risdon aerosol valve *quality* . . . performance-proven on many millions of packages, gives full assurance of customer-pleasing results over the entire package life.

An inferior valve can be your most expensive "bargain." Insure success — specify Risdon.

Write For Free Booklets On RISDON Valves

FOR Pressurized Products Packaged in Glass, Metal or Plastic Containers

DISPENSING Conventional Aerosols, 3 Phase Products, Alcohol Base Products, Water Base Products, Foam Products, Powder Sprays, Metered Sprays, Ultra-Low Pressure Applications, Products Containing Propellent Emulsions or Dispersions, etc.

RISDON THE RISDON MANUFACTURING CO.

Valve Division Naugatuck, Conn.

Western Show in July

Occupying more exhibit area than ever before, the biennial Western Packaging & Materials Handling Exposition will soon open its doors for the eighth time, running from July 19 to 21 at the Pan Pacific Auditorium in Los Angeles. Space is 97% reserved, according to Saul Poliak of Clapp & Poliak, Inc., show management.

Close to 10,000 visitors are said to be expected for the 150-booth exposition and a concurrent educational packaging clinic which has been scheduled in cooperation with the Western Packaging Assn.

The 1958 show in San Francisco attracted about 7,300 visitors to the exhibits of 139 companies. Two years earlier there was a record attendance of 8,600 and 148 booths at Los Angeles. ●

Cake mix in a bag

[*Continued from page 95*]

are prepaid only on all orders that are received for more than 600 lbs. This is done to discourage profit-dissipating small orders.

The entire daily production of pouch-packaged cake mix is handled at the company's plant on a single, twin-tube automatic forming, filling and sealing machine. Mounted on reels at the back of the machine are four webs of pouch material, two for each tube. The pre-printed outer ply and the film interior ply for each come together in the machine, where they are formed around the filling tube, longitudinally heat sealed, filled, flattened, crimp sealed and guillotined. An electronic web scanner assures accurate registration of pouch design.

Obviously, the soft, unsupported packages cannot stand alone in shelf display. But Steeves has solved this merchandising problem, again with an eye to cost control. Packed in each case of Quick as a Wink are low-cost collapsible paperboard trays that permit multiple upright stacking of the pouches. Price copy printed on the front tray panel is aimed at promoting multi-package purchases by the shopper.

The easy-to-store cake-mix pouch is opened simply by tearing across the top heat seal. Mixing and baking directions are printed on the rear panel of the pouch. ●

HELPFUL BOOKLETS FREE!

POLYETHYLENE FILM. 14-page catalog contains specifications, order information, yield charts and formulas on available general, application engineered, high impact and specialty polyethylene films. Chippewa Plastics Co., Div. of Rexall Drug and Chem. Co. **(E-050)**

FILLING AND STOPPERING MACHINES. 12-page catalog describes features of machinery and equipment designed for automatic powder and/or liquid filling and stoppering of glass containers or vials. Specifications. Perry Industries, Inc. **(E-085)**

PLASTIC PACKAGING SUPPLIES. 40-page directory gives geographical listing of plastic packaging molders and extruders in the United States, listed in alphabetical order. Plastics Div., Koppers Co., Inc. **(E-074)**

PREFORMED MOLDED FIBRE. A 24-page booklet describes properties, special features, applications of cellulose fibres made in combination with synthetic resin additives. Can be molded to various shapes and sizes, and possesses dimensional stability and strength. Hawley Products Co. **(E-071)**

NEW PACKAGE CUSHIONING. 8-page illustrated catalog folder describes line of cushioning material made from polystyrene beads, designed as an interior cushioning medium to protect articles from shock and vibration during transportation and handling. Specifications and data. Armstrong Cork Co. **(E-057)**

Any of the booklets described here plus many others—forty-four in all—are available for the asking, without charge or obligation.

Just turn to the Manufacturers' Literature page in this issue (it's printed on heavy green paper), circle the numbers corresponding to the booklets you want, fill in the reply postcard, and mail. No postage needed.

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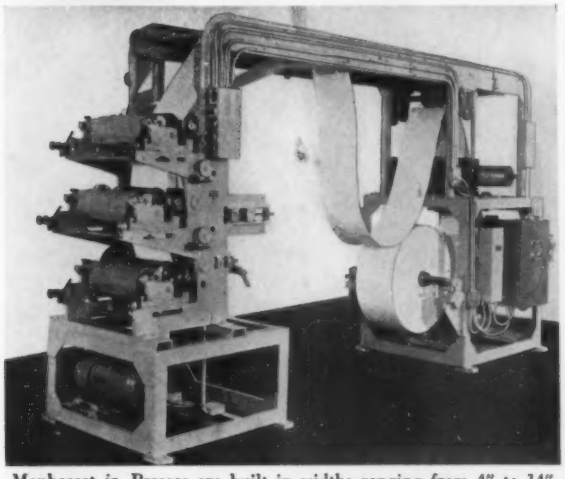

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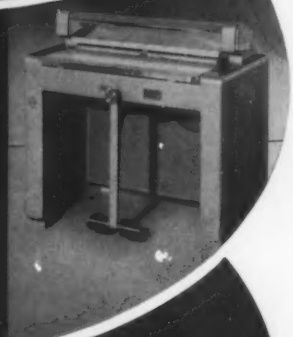
Performs 180° edge folds at rate of 600 to 1200 folds per hour on blister packages made from thermoplastic sheet from .003" to .020" in thickness. Heated, 18" blade actually molds sheet into desired fold to accommodate slide-in cardboard bottom. No tearing or opening up.



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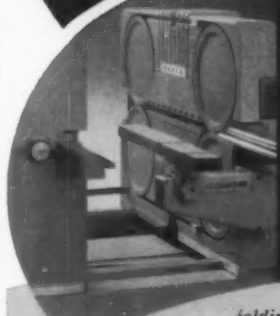
This dual-purpose 30" sheet plastic fabricator gives you the advantages of TWO machines at ONE price. The Folder-Creaser handles sheets .003" to .020". Folds minimum of 700 per hour at 180° and "instant creases" 90° angles at minimum of 1200 per hour without rejects, tearing or opening up.



BEAD 2 EDGES AT ONCE
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Simultaneously beads both edges of plastic sheet, roll, die cut blanks and strips .005" to .020" thickness, 2" to 20" wide. Nine different beads and Specials! High speed production! 500" to 1,000" per MINUTE. Each head can be used independently as a single edge beader if desired.

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This new Reynolon film offers you these advantages: It is crystal clear. It is shrinkable—provides a skin-tight package. It has high tensile strength, offers low temperature flexibility, has good shelf life. It is printable and sealable by heat or by adhesives. It can be metalized. It is easily laminated to paper, chipboard and other materials.

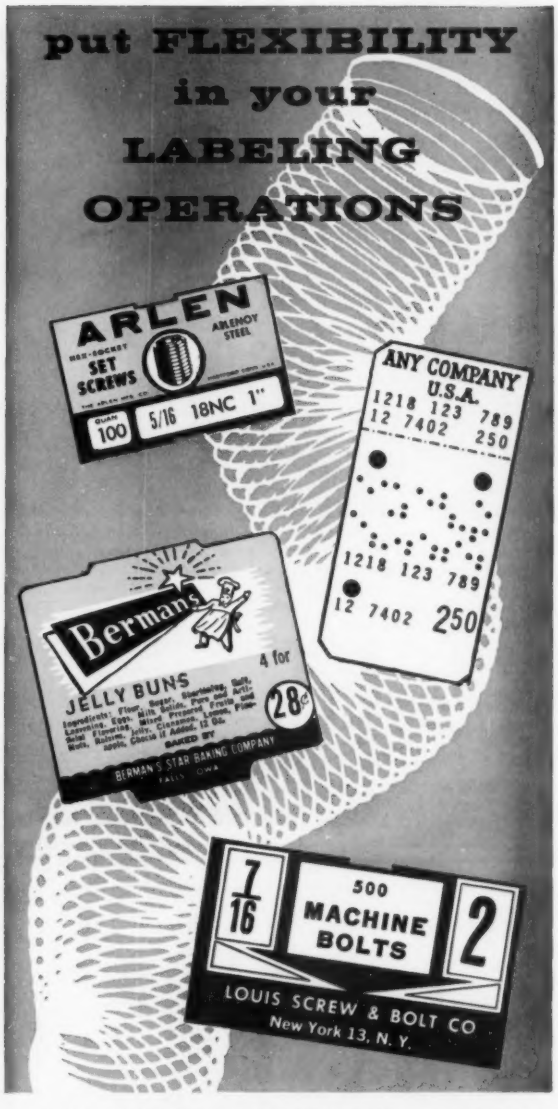
New Reynolon oriented PVC film is also economical. It offers an ideal solution to better, less costly packaging of many food items—poultry, meats, cheese, fruits, vegetables plus a wide variety of other items such as window shades, stationery supplies, paper products and others.

For details and technical assistance on Reynolon films, contact the Reynolon Plastic Specialist in the Reynolds office in New York, Camden, Detroit, Chicago, St. Louis or Los Angeles. Or write *Plastics Division, Reynolds Metals Company, P.O. Box 2346-RM, Richmond 18, Virginia.*

REYNOLON PLASTIC FILM

PLASTICS DIVISION
REYNOLDS METALS COMPANY

put FLEXIBILITY in your LABELING OPERATIONS



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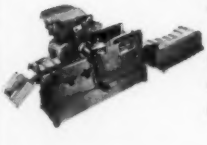

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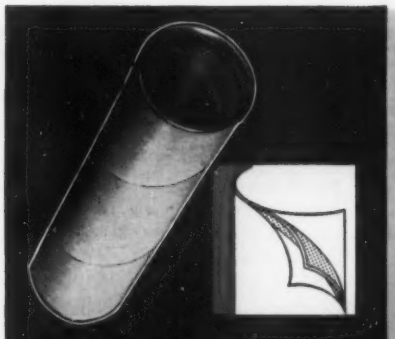
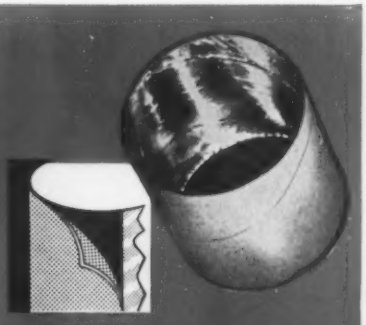


LARDPAK* LINER.
Lardpak liner inside, then fibre, and printed Lardpak paper used outside. A grease barrier for scores of materials. Example of use: caulking compounds.

LARDPAK*, PITCH-BACKED.
This combination offers the packer both grease and moisture resistance. Example of use: various chemicals.



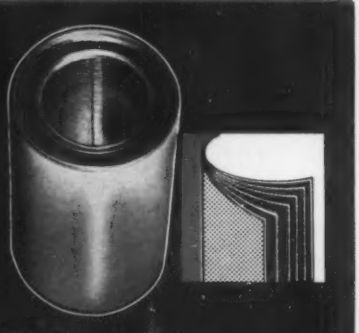
FOIL LINER.
Foil backed by pitch followed by two layers of fibre laminated with glue. Pitch serves two purposes: As adhesive for foil (2) sealer for pin holes in foil. Example of use: seed innoculants.

• There are many sides

to the R. C. FIBRE CAN Packaging Story

• a complete line to fit your packaging needs

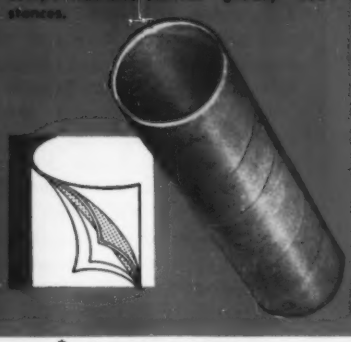
Have You a Fibre Can Packaging Problem?
Contact your nearest R. C. Sales Office for experienced advice. There's no obligation.

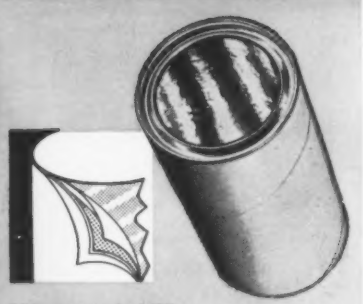


CHIP KB.
Pitch layers between layers of fibre, for moisture resistance. Convolute can shown here. Example of use: wallpaper cleaner, cold water paints.

PARAFFIN COATING.
Parrafin lining obtained two ways: spiral wound from coated fibre, or sprayed in convolute can. Example of use: moth crystals, drugs, etc.

LAMINATED KLEENWRAP.
Lardpak liner inside, followed by fibre, followed by two pieces of glassine laminated together with wax. High grease and moisture resistance. Example of use: caulking compounds and similar "greasy" substances.





FOIL PAPER-BACKED.
Foil backed up by 20 lb. white bond paper, which serves as inside ply of container. Ideal for packaging that requires both moisture and grease resistance. Example of use: ready-to-heat biscuits, and similar food products.

* ® Rhinelander Paper Co.

R·C· CAN COMPANY

R.C. CAN CO. The Stamp of Quality ST. LOUIS, MO.

MAIN OFFICE & FACTORY: 9430 Page Ave., St. Louis 14, Mo.

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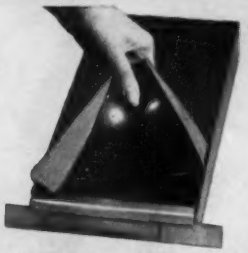
SALES OFFICES: ATLANTA 6, GEORGIA—L. C. Morris Co., P. O. Box 8042 Station F., 1156 Dalon Drive, N. E. • BOSTON 10, MASSACHUSETTS—Robbins Paper Company, 263 Summer Street • CHICAGO 51, ILLINOIS—Joe Rovin, R. C. Can Company, • 4806 W. Chicago Ave. • CINCINNATI 2, OHIO—Harris Containers, A. J. Harris, 307 E. Fourth St., Rm. 426 • INDIANAPOLIS 20, INDIANA—John C. Heim, 1500 E. 77th St., (Mail Address, P. O. Box 6043) • LOS ANGELES 43, CALIFORNIA—Can Supply Company, 4429 Crenshaw Blvd. • MEMPHIS 3, TENNESSEE—S. W. Scott & Son, 608 McCall Bldg. • MILWAUKEE, WISCONSIN—National Paper, Can & Tube Company, 401 South 7th Lane • MINNEAPOLIS 1, MINNESOTA—W. L. Bennett, 126 S. Third St., • NEW ORLEANS 12, LOUISIANA—C. E. Dobson, 1003 Carondolet Bldg. • NEW YORK CITY, N. Y.—R. C. Can Company, 225 W. 34th Street • ORLANDO, FLORIDA—Palmer Supplies Co., of Florida, Palmer Bldg., 209-211 E. Robinsen • ST. PETERSBURG, FLORIDA—J. H. Mackensen, Bay Pines Trailer Park, 10005 Bay Pines Blvd.

how to
"PEEL"
residue glue from a coating tank...

apply
RELEASE-COTE
the miracle
RELEASING AGENT



With just a thin film of RELEASE-COTE on tank surfaces, glue and adhesives peel "like skin off a banana."

FREE
TRY OUT OFFER!
A generous sample of RELEASE-COTE for you to test. (Note how operators like Release-Cote's gentleness to their hands).

Distributed by
POTDEVIN MACHINE CO.
244 North Street, Teterboro, N. J.
World's largest producer of coating machines.

Visiometrics to aid package design

A new department has been organized at the Crowell Carton plant of the St. Regis Paper Co. Container Division—the Department of Visiometrics—aimed at eliminating through mechanical devices much of the subjective individual guesswork and personal preference from package and graphic design. Work of the department is expected to result in more scientifically designed cartons that will make the most sales impact at the consumer level.

Test of Tidy Cat package being run on Crowell's new Polarascope. Alf Nelson, its inventor, is shown checking the instruments.

Originator of the department and inventor of the measuring devices to be used is Alf Nelson, director of Crowell's Package Design Dept. Visiometrics will serve as a branch of the larger design department.

First of several devices to emerge from nearly six years of research and development is the Polarascope. This instrument is reported to rate two or more competitive packages or graphic designs in terms of comparative visual impact, visual flow, attention value, brand recognition, product recognition, legibility and depth penetration. While the instrument measures these factors, it is up to the customer to decide which elements in the design he feels should be emphasized. Carton designs earn a numerical rating by components, the sum becoming the package "sales or merchandising appeal quotient" on a comparative basis.

The Polarascope is a cabinet measuring 28 by 28 by 34 in., containing a source of constant illumination. Mounted in front is a revolving viewing glass or scope. Attached to the ring of the "scope" is a direct-reading scale to give a mathematical reading. Test cartons or designs are placed in the cabinet and the viewer starts it with a control switch. As soon as a unit of design is legible on the viewing glass, the motor instantly stops and the numerical reading on the scale is noted.

Other measuring devices being developed include an Angle-Meter, the Visio Selectograph, the Vidiograph and the Associascope. ●

New survey of super shopping habits

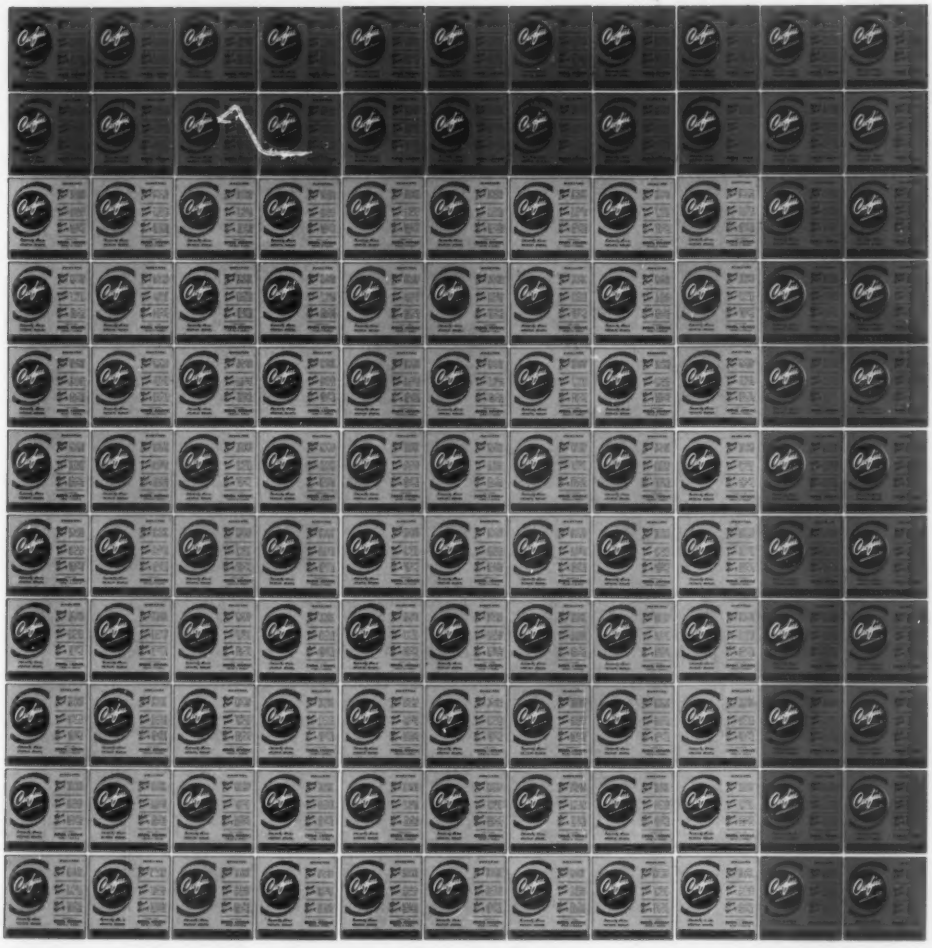
The constant need for more effective packaging and for more aggressive store-level merchandising of packaged products is pointed up in the "6th Du Pont Consumer Buying Habits Study," which has just been released by E. I. du Pont de Nemours & Co., Wilmington, Del. Survey findings are based on an analysis by an independent research firm of 63,795 items purchased by 4,661 shoppers in 225 representative supermarkets across the nation.

The study reveals a sharp upswing in "unplanned" purchasing. According to the report, almost 70% of all items purchased in a supermarket today are the result of buying decisions made by the shopper while she is in the store. About 30% of the items represent purchases planned by her at home. By comparison, a similar Du Pont study conducted in 1949 revealed that in-store buying decisions accounted for only 56.7% of a shopper's total supermarket purchases.

Another survey finding of great significance to consumer-goods packagers is that today's average shopper spends 50% more time in a supermarket visit, yet buys only 8% more merchandise than she did five years ago. Du Pont points out that these factors, coupled with the fact that many more products are now competing for supermarket space, accent the need for packagers to arm their products with greater shelf impact if they hope to succeed in the battle of the brands.

The 1959 buying-habits study consists of two separate, illustrated booklets, titled: "The Shopper and the Supermarket" and "Today's Buying Decisions." Copies of the complete study are available by writing to Du Pont. ●

49% MORE LITHOGRAPHED CAN BODIES PER SHEET



with the new 44-inch Hamilton 502 Duplex Slitter

Now you can take advantage of *big* sheets of tinplate to slit maximum numbers of lithographed body blanks per sheet. At the same time you will cut down on scrap percentage and handling cost per thousand.

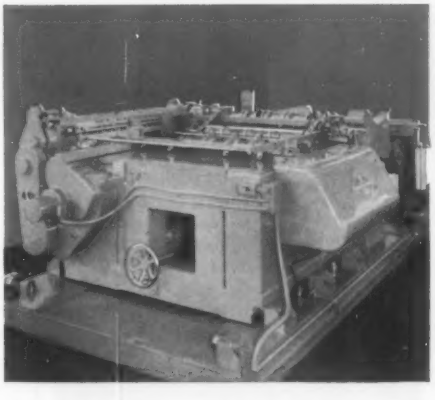
Your production of body blanks can increase nearly 50% in certain sizes with this slitter, the largest built.

This soundly engineered and constructed machine embodies the most recent developments in Hamilton's advanced can machinery line.

Some of its outstanding features

- Heavy construction of base and table to minimize vibration
- Drive gears housed in oiltight boxes
- All parts contacting tinplate chrome plated
- Handwheel control provides 32-inch table separation, easy access to first table cutters for grinding
- Precise registration of lithographed sheets through right and left-hand cam-actuated side gages; both single and 2-point gaging available
- Split-capped cutter shaft housings for easy removal of shaft assemblies
- Magnetic support rolls for first table

Another important feature is the fact that a new-design electric cutter grinder attachment and body blank stacking table, and automatic lubrication, are available.



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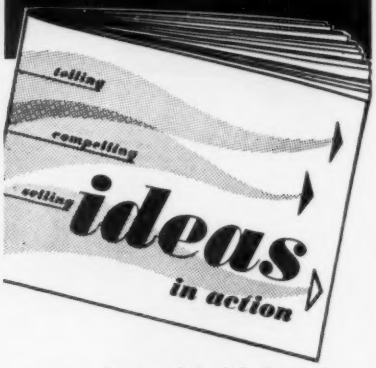
Send for this new 48-PAGE "IDEAS IN ACTION" BOOK ...free



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Full-color book loaded with hundreds of ideas in action . . . from the large project to the small . . . for the largest corporation to the smallest.

Covers these categories: Hard Goods; Soft Goods; Small Wares; Foods and Beverages; Cosmetics, Drugs and Chemicals; Services; Point-of-Sale and Dealer Aids; Trademarking and Name Identification; Shipping Labels of Distinction; Merchandising, Advertising and Publicizing; Pricing and Special Offers; Instruction, Inspection and Guarantee, Special Events, Anniversaries and Promotions.

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Set-up box winners

[*Continued from page 112*]

Co. won first award in *sporting goods* for Pro Golf Ball Co. Kroyden Cruiser Golf Balls package, which was designed by Frank Becker. A Baker's Dozen presentation of golf balls in a display box with acetate windows shows the 13th ball. Package is sturdily constructed and colorfully designed. The dozen balls fit tightly in place in three set-up boxes; the 13th ball is snug in center platform.

1-U. Friend Box Co. produced the winner in *mailing boxes* for CBS Electronic Sales Corp. IBM Inventory Control Cards. The new item is designed to hang on dealer's counter or wall to receive IBM pre-punched cards with tube. At regular intervals the cards are mailed back to CBS headquarters for automatic replacement. Mailing box has gummed flap and thumb-nail lid arrangement, and is pre-addressed for air mailing.

1-V. A dual-purpose box for Baker's ladies shoes won the *footwear* award for Frank C. Meyer Co., Inc. Pink braided cord enables the purchaser to carry the box out of the store. Box promotes brand on the street and may be re-used for knitting box or storage purposes in the home.

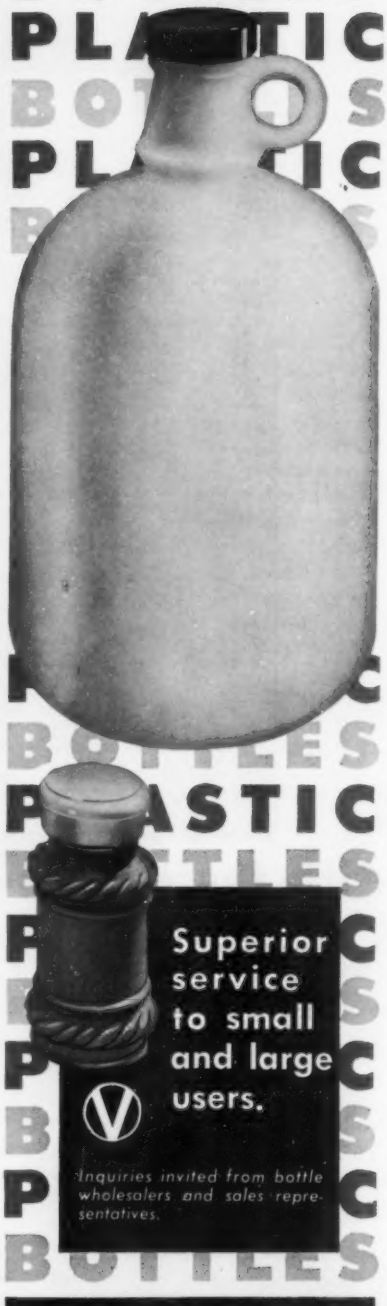
1-W. In the *textiles* category, first place went to Specialty Paper Box Corp. for Barth & Dreyfuss Royal Princess Towel Set, designed by Tinsley T. Jepson. The de luxe gift box for towels and accessories has white box wrap designed with red and gold crowns. Decorative cellophane is used to overwrap the package.

1-X. First place for *retail boxes* went to I. Magnin & Co. store gift box. Gold-colored foil box is made in 60 sizes. Pink label lines carry store's name in gold on top and side of cover.

1-Y. A transistor pocket radio for Motorola, Inc., won the award in the *electronics* group for Master Paper Box Co. Book-like package holds radio and accessories nested in a sturdy platform to protect the various items. Box-wrap colors are blue lines on black.

1-Z. The *men's apparel* award went to Old Dominion Box Co. for Gem Dandy, Inc., tie-ensemble gift sets. A family of gift packages is provided by three boxes that display

STOCK AND CUSTOM PLASTIC BOTTLES

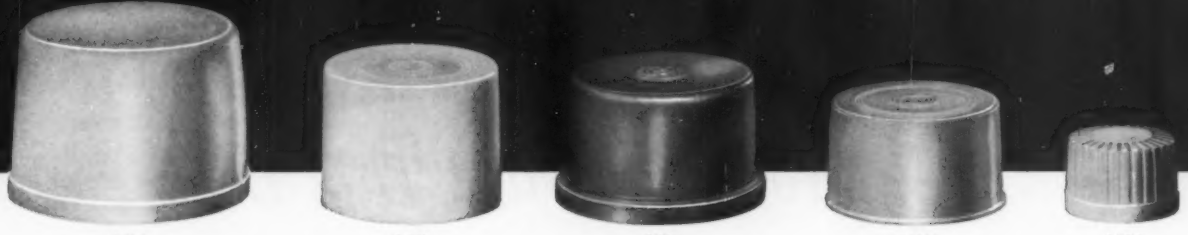


Superior service to small and large users.

Inquiries invited from bottle wholesalers and sales representatives.

PLASTIC BOTTLE DIVISION OF
Vantines, Inc.
(Since 1866)
Flushing 54, N.Y. · LE 9-3000

Only Gilbert makes unbreakable plastic stack caps to fit every aerosol can



#301
For all "211" fabricated cans

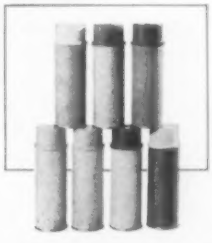
#100
For 6 oz. "202" Crown extruded cans

#201
Grips outside rim of all "202" fabricated cans; with positive snap fit for all valve styles

#200
For all "202" fabricated cans; cap grips valve cup

#400
For all 1" valve cups

As a pioneer in plastic packaging, Gilbert Plastics has always concentrated on creating new products to meet the most advanced demands of the packaging industry. Gilbert was **first** with the unbreakable plastic stack cap . . . **first** with a complete range of plastic caps for every standard can . . . and Gilbert will continue to be **first** in plastic caps no matter what the future form of aerosol packaging. Write today for complete information, samples and prices.

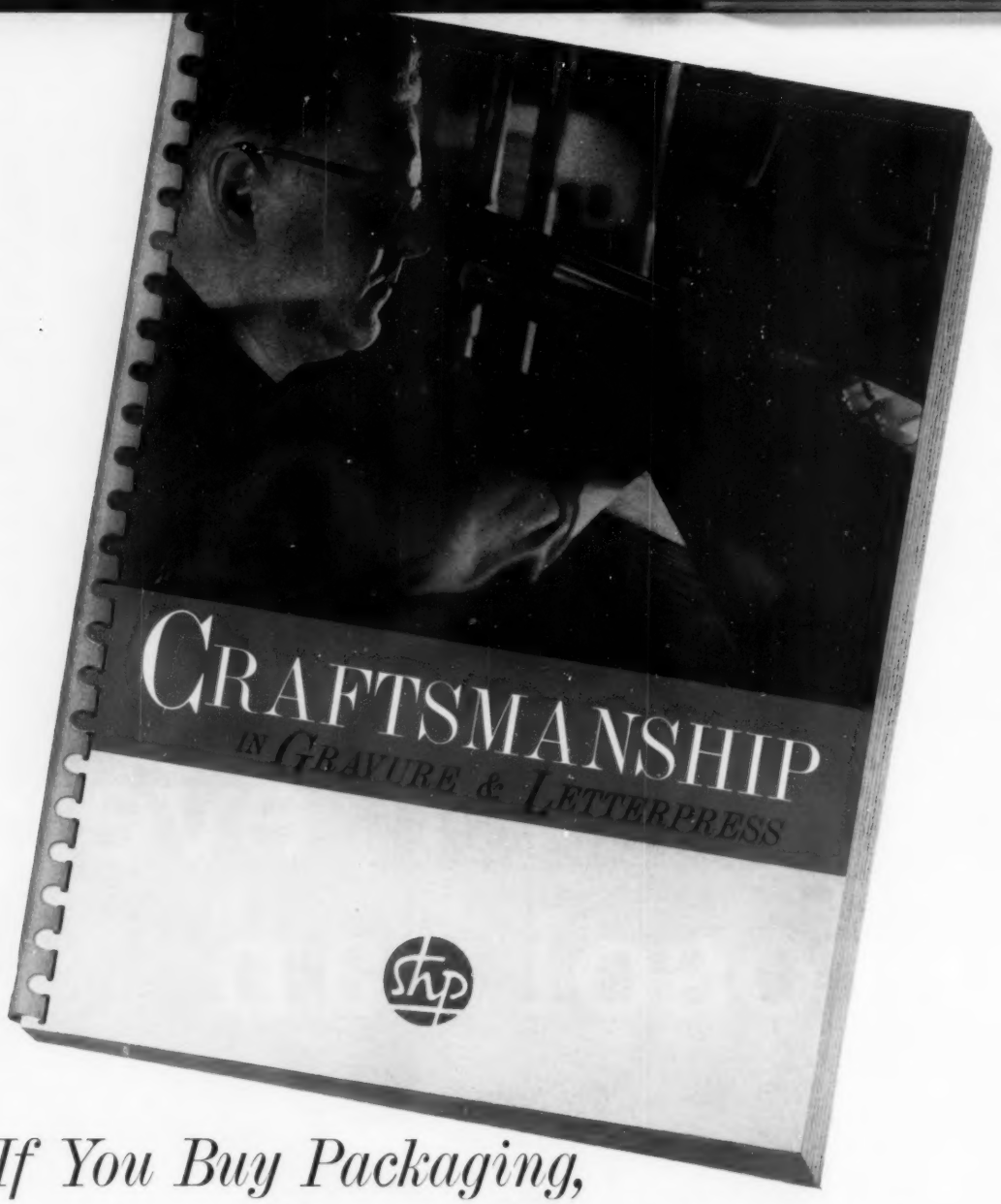


Some sales territories still available to qualified representatives.

GILBERT PLASTICS, INC.

10 Boright Avenue • Kenilworth
New Jersey • BRidge 2-6400

Canadian distributor: Twinpak, Ltd., 6525 Somerled Ave., Montreal, Quebec, Canada • British affiliate: I-TO-I PLASTICS, Bridge Close, Romford, Essex, England



If You Buy Packaging, You Will Want This Book

"Craftsmanship in Gravure & Letterpress" describes and illustrates the service facilities of one of the most modern printing plants in the country for the production of labels, wraps, soft packs and other forms of packaging; and for the printing of annual reports, catalogs and all types of advertising. Included are beautiful color reproductions of famous national brand labels and wraps and a description of our unique Quality-Control Program.

The book itself is a superb example of the graphic arts and should be in the hands of every buyer of printing.

A limited number are available for general distribution. A copy will be sent to those who request it on their business letterhead.

STRAWBERRY HILL PRESS, Inc.

23-02 49th Avenue, Long Island City 1, New York, N. Y.

RAvenswood 9-1603

PRINTERS FOR BIG BUSINESS

Representatives in Baltimore, Cincinnati and St. Louis

the merchandise under formed-acetate sections. The box is ready for gift presentation by the use of ribbon at each end of the package.

Class 2. Best surface design

C. Albert Sauter Co., Inc., won first award for Merck Sharp & Dohme Hydeltrasol drug mailer box and Rediplete Polyvitamin box, designed by Andrew B. Schmith. Colorful design for Hydeltrasol is an eye catcher. Eight motifs pertain to skin diseases, identifying contents. Rediplete Polyvitamin box provides a psychological packaging game appealing to children.

Class 3. Superiority of construction

First award was won by C. B. Bechtold Co. for National Publishing Co.'s RCA phonograph-record case. Well-contructed box consists of outer case and insert to hold records. Elegant artwork is combined with gold lettering on dark red cover. Insert section is made of simulated black leather.

Class 4. Best display box

Dennison Mfg. Co. received top honors for W. E. Bassett Co. Trim accessories family of boxes with superior sales appeal and multiple display advantages. With copper-colored wraps, boxes are made in just three sizes, employing platform inserts to accommodate a variety of items. Box ensemble is designed so that lid-type base slips over wire rack for group display or for single display with the cover inserted under the box base.

Class 5. Best transparent box

First-award winner was Tobin-Howe Paper Box Co., for Crown Handkerchief Co., Inc., Vanity Fair Tie and Handkerchief ensemble, designed by Renzo Bemporad. Victorian caricature attached to lid attracts attention. Three items are encased in acetate blister.

Class 6. Best for special construction

First award went to George H. Snyder, Inc., for Bayuk Cigars, Inc., Phillies display box. Third-dimensional plastic baseball is an attention getter, ties in with radio-TV broadcasting of major league baseball. Inner dividers provide for neat selection arrangement. ●

Add "Impacts" to your sales

EXTRUDED ALUMINUM CANS from CLARKE

Engineered to your specifications

Clarke rigid aluminum cans are the perfect answer for those difficult-to-package products.

They're seamless and strong . . .

. . . lighter to ship—40% lighter than conventional cans of equal size . . .

. . . available in a wide range of shapes and constructions—in diameters up to 3" and lengths up to 25".

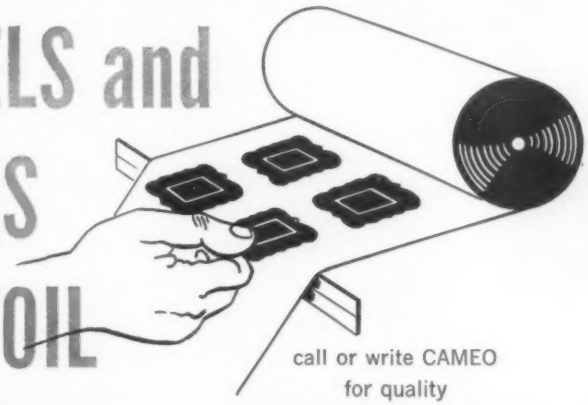
For free samples and additional details, write, wire or phone today.

CLARKE CAN OF PHILADELPHIA

"A Clarke can is a compelling invitation to buy"

CLARKE CAN CO., INC., E. York & Thompson Sts., Philadelphia 25, Pa. GArfield 6-3370

PRESSURE SENSITIVE LABELS and SEALS for FOIL PAPER and ACETATE



call or write CAMEO for quality

Press-*SURE*-Stick labels and seals

CAMEO DIE & LABEL CO.
154 W. 14th Street, New York 11 N. Y.

Permanent or removable adhesive

In Canada Cameo Crafts Inc., 157 St. Paul Street, West Montreal 1, Que.

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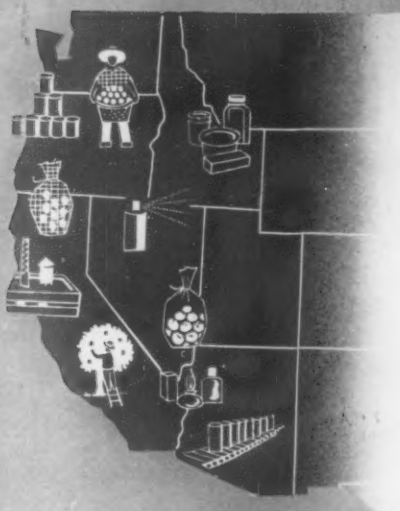
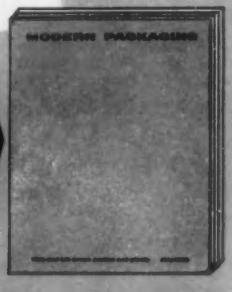


an exceptional opportunity to sell the booming WESTERN PACKAGING MARKET



Special Western States Section, July Issue

Here's why the Western States Section adds up to an advertising "natural"!

It provides the full advertising impact of the top national packaging magazine

. . . in a special "Western States" Section dealing exclusively with Western packaging conditions and developments
. . . timed for distribution to Western packagers before they assemble at the Eighth Western Packaging Show in Los Angeles
. . . with additional circulation of the special section to boost total Western distribution to the 6,000 mark for blanket coverage of the market
. . . coupled with MODERN PACKAGING's full nation-wide circulation of over 30,000
. . . and all this at regular advertising rates!

Or . . . if you are interested in reaching MODERN PACKAGING's Western audience only . . . select the special "split" distribution plan that lops off unwanted, national circulation and delivers your ad—with all the prestige of MODERN PACKAGING behind it—solely to readers in the eleven Western states.

Under the terms of this special option, advertising rates are lower—less than those of a regional magazine!—yet you get a guaranteed minimum of 6,000 Western readers! The Western States section will appear with the regular July issue of MODERN PACKAGING. Closing date for reservations is May 23rd. For more details, space reservations and rate card, contact your nearest MODERN PACKAGING sales representative.

MODERN PACKAGING

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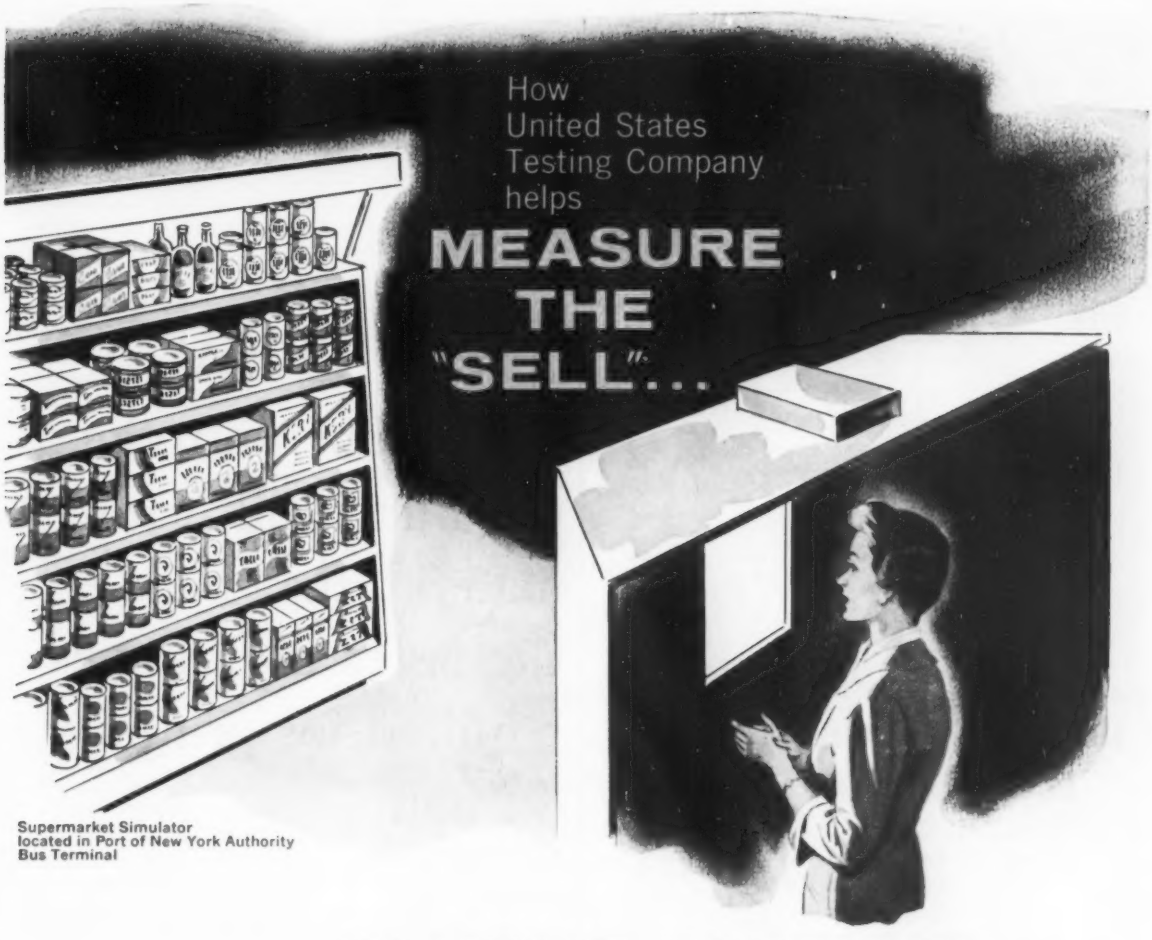
Offices: New York 575 Madison Ave.; Chicago 101 E. Ontario St.; Cleveland 3537 Lee Rd.; Los Angeles 6535 Wilshire Blvd.; Atlanta 1722 Rhodes Haverty Bldg.



Supermarket Simulator
located in Port of New York Authority
Bus Terminal

...IN YOUR PACKAGE

Our Supermarket Simulator with our selected consumer panels will tell how much "sell" is in your package... and also how to put more in it. Our measurements are meaningful because our tests are conducted under actual store conditions, with the package in competition with other brands and products.

We are equipped to measure many properties of packages, such as: legibility thresholds, apparent size, recall potential, apparent qualities, brand recognition, and others. Consumer panels can be selected to meet any criterion. We work out all steps with the client and welcome his participation and observation.

Why not let us measure the "sell" in your package... and help you increase it? Write or phone for full details. No obligation.

Send for your free copy
"Analyses in Visual Communication".

Psychometrics Division
United States Testing Co., Inc.
1415 Park Avenue, Hoboken, N. J.

UNITED STATES TESTING CO.

The World's Most Diversified Independent Laboratory.

Branch Laboratories
Boston · Brownsville
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18

Feedomatic AIR CLEANER

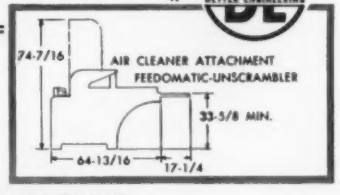
OVER 200 NOW IN USE

Unscrambles and Cleans in One Operation

First of its kind! Thoroughly air cleans each container before it is single-filed onto the conveyor. Removes all dust, lint and other foreign matter. Variable speeds from 30 to 150 per minute on round, oval and rectangular containers.

SEND FOR CATALOG

of Modern Equipment and Accessories for Filling and Labeling.



Feedomatic Unscrambler for single-filing only is available as a separate unit.

OUTSTANDING ADVANTAGES

Silent Operation • Perfect synchronization, through integral drive, with B-E FILABELMATIC and B-E ROTARY FILLER • Gentle action • No marring or scratching • Rapidly adjustable dividers • Changeover time takes only minutes • Take-off conveyor to right or left • Can be used 4, 6 or 8 wide (Belt 36" wide) • Large inventory of containers on machine • Available with 3¼" or 4½" conveyor chains • Variable speeds from 30 to 150 per per minute • Handles smallest containers . . . gallons, too.

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US RUBBER PRINTING PLATE MATERIALS

And now

U.S. Rubber introduces the Buna-102 plate material that handles the faster drying inks required for printing on film

Ordinarily the fast-drying inks required to print on film destroy or shorten the life of rubber plates.

But plates made of Buna-102 rubber have long life since they are resistant to the new corrosive inks. This means a sharp cut on costly downtime, elimination of delays and customer irritation.

Buna-102 plates represent an entirely new concept in Buna N compounding.

Williamson & Co., world's largest distributor of rubber and plastic-platemaking materials to the printing trade, offers you this *exclusive* product of U. S. Rubber, together with any technical assistance you may need. Order from any of the Williamson strategically located refrigerated plants.

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Grimsby, Ontario *San Mateo, Calif.*
or contact U. S. Rubber direct at Providence, R. I.

WILLIAMSON & CO.

CALDWELL, NEW JERSEY

Shoe shines made easy

[*Continued from page 105*]

of the can, where control of registration is good. Copy at the bottom of the can face consists of only three words—"paste/applier/cloth"—and the script type face that was selected is deliberately casual in style so that any printing distortion that may occur only accentuates the intended effect.

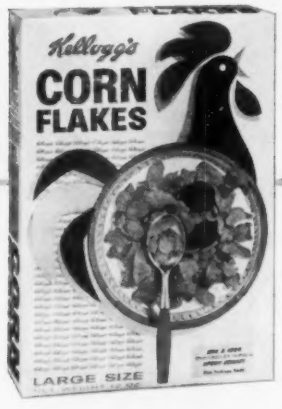
All three can parts are made of 75-lb. steel with ¼-lb. tinplate. Cover, base and inner shell are uncoated inside, but the shell has an outside coating of special lacquer to facilitate "welding" of the urethane-foam pad.

The urethane-foam applicator starts out as a disk ½ in. thick. The metal shell burns into the disk for a distance of about ⅛ in., when the two are joined, but the ⅜-in. pad left is ample for even application of the polish. The foam's small pores act as polish reservoirs.

During shelf life, the wax surface of the polish is kept soft with a covering of aluminum foil. This seal utilizes a 2.0-mil foil and an extruded gasket-type layer of adhesive will be applied mechanically around the lip of the can base to hold the foil in place. Once the package is opened by the consumer and the foil stripped off, the urethane-foam applicator rests directly against the polish, ready for use. The 3-by-15-in. cloth can be stuffed haphazardly back into the can and will still fit.

There is a pronounced family resemblance between the bottle and can design,

The color treatment of the liquid bottles carries a connotation of pleasantness and ease of use in keeping with the convenience advantages of the package. However, the paste polish has a more rugged look, appropriate to a man's product. A crossbar design is used on both packages, as is the Johnson's double diamond trademark. Polish color is indicated by lettering on the can base; the base is also printed to match product color. Liquid color is indicated by a lettered oval near the bottom of the bottle. Caps are red for the self-shining polish, orange for the children's "scuffed-shoe" polish and white for white. Both can and bottle carry use instructions on the back. Neither package requires a carton. ●



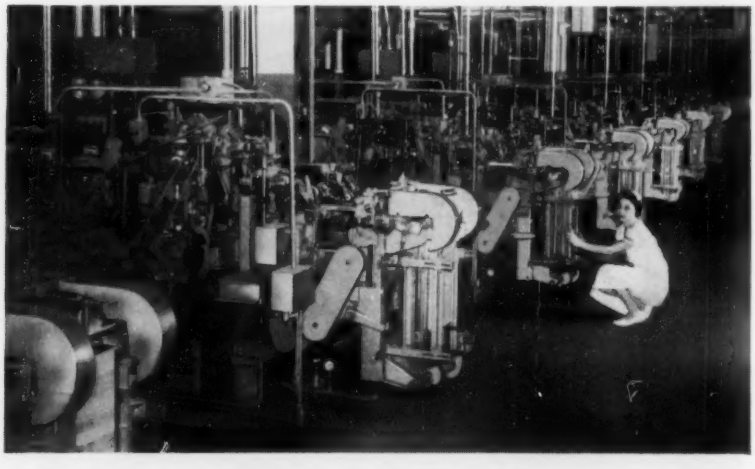
PACKAGING ALL-IMPORTANT IN KELLOGG SUCCESS

- Kellogg quick to up-date
- Signature alone remains unchanged
- Rely heavily on Pneumatic equipment

Kellogg has never been a stand pat organization when it comes to packaging. Traditionally they have been leaders in meeting changing times and conditions with appropriate "change of face" designed to give their products the competitive advantages of up-to-date shelf appeal and visibility. Kellogg packages have always been noted for their double duty effectiveness — serving as sales aids as well as protective product containers.

Kellogg's packaging methods naturally reflect Kellogg's progressive approach to this aspect of their production and merchandising. In Memphis, Kellogg's newest facility, as well as in other Kellogg plants, Pneumatic packaging equipment predominates. Memphis production of individual service packages is handled on battery arrangement of Pneumatic Package Maker combinations. The larger containers of Kellogg cereals are formed, lined, weighed and top sealed on adjustable lines of Pneumatic machines.

The strong emphasis on Pneumatic equipment prevails throughout their fifteen other Kellogg plants and branch installations around the world that supply more than a dozen different breakfast cereals to the United States and one hundred other countries. Such huge volume demands maximum operating efficiency to avoid product waste, time losses and maintenance expenses which could amount to critical figures. Pneumatic operating efficiency, flexibility and service is a Kellogg safeguard — one extremely important means of "profit protection" widely used by the foremost producers of many kinds of packaged and bottled products. Good packaging for you, too, may well begin with Pneumatic.



Several Small Double Package Maker combinations in operation at Kellogg's modern plant at Memphis, Tennessee.

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THE BEST SALESMAN FOR BREAD IS CELLOPHANE

Bread, potato chips, what-have-you—you'll find that cellophane will get a product from the store shelf into the shopping basket faster than any other packaging material. The reason? It's because only cellophane provides a sparkling transparency that shows your product to its best advantage.

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assures economical production of sure-sealing closures!

Here's another interesting use of versatile Escon: as closures, the seal can be built-in because the versatility of Escon allows thin sections for a positive seal, and stiffness necessary for assured grip. This combined with its ability to snap-back provides full, automatic production with stripper plate molds maintained on short cycles. Because polypropylene is the world's lightest plastic, Escon yields more pieces per pound. It also exhibits high torque strength; fatigue better than any other thermoplastic; and allows brilliant coloring. Escon makes excellent hinge closures with under-cut locks plus snap closures that pop on and off. In addition, Escon provides many more properties. Escon can help produce better closures as well as countless other products. Investigate Escon today! *Trademark

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'61 PMMI Show dates

A change in the dates for the 1961 Packaging Machinery Mfrs. Institute Show has been announced. The event, previously scheduled for late October, will be held from Nov. 7 through Nov. 10, 1961, in the new Cobo Hall, Detroit, Mich., where it will occupy two of the building's four exhibit halls.

Show management will be under the direction of Hanson & Shea, Inc., which handled the three previous PMMI shows, according to W. W. Anthony, Jr., of Crompton & Knowles, who is chairman of the 1961 PMMI Show committee. ●

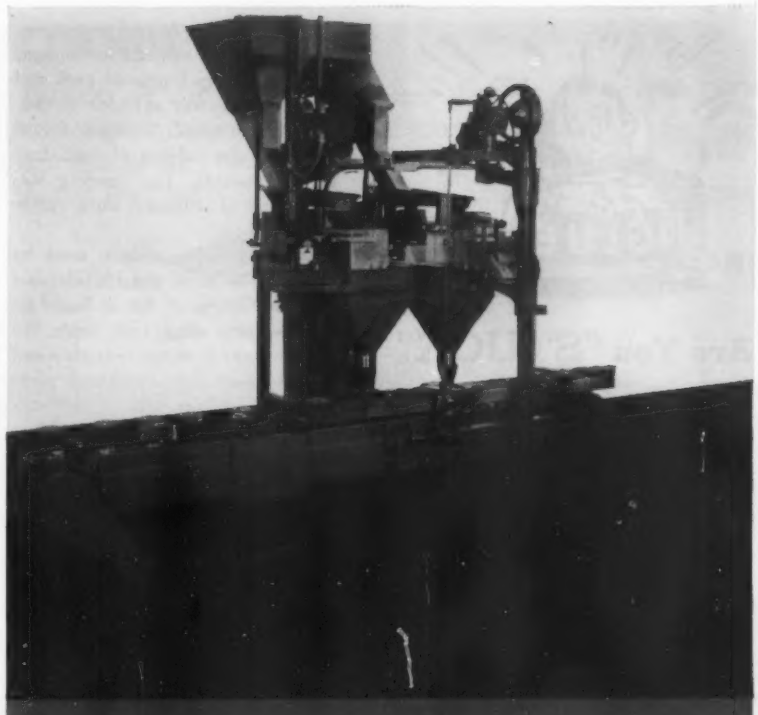
Student projects

Growing interest of industry in the activities of students of package design is evidenced by two student events, one a joint project by Du Pont's Film Dept. and three leading design schools—Illinois Institute of

Three highest-scoring packages in Du Pont student project. At top, cookie package that appears to suspend contents in air; at left, spiral peel-away cylinder; at right, fold-up fractional pack.

Technology, Chicago; Carnegie Institute of Technology, Pittsburgh, and the Philadelphia Museum College of Art—and the other a package-design contest among students of art in some 20 colleges and universities in Michigan, sponsored by the St. Regis Paper Co.'s Crowell Carton Division.

The Du Pont project for the development of a cookie package had the dual purpose of acquainting industrial-design students with typical commercial packaging problems in the food industry and of providing the industry with a fresh, uninhibited approach for solutions to its pack-



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SCOTT Net Weighing Unit

The famous Scott net weigher—fastest and most accurate net weigher made—serves double duty in this fully automatic fill-and-weigh system for mixed salted nuts. Empty cans are delivered from an unscrambler and carried to twin weighers on two lines by a dual-line conveyor.

After they are filled and weighed, the containers converge to a single line and proceed to a vacuum capping machine.

Various scales and power feeders can be provided to suit the requirements of a wide range of products, including hard candies, rice, beans, seeds, salt, tacks, etc. Also, any rigid container of glass, plastic or paper may be used.

Features include automatic controls for stopping and releasing containers at filling positions; for vibration to settle the product, and for converging into a single line. There is also a provision for "No can—no fill".

For complete details on what the dual-line Scott weigher can do for your packaging operation, send us complete details on the types of products and containers you run, and the weight range and speed you require.

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AUTOMATED MACHINES SIDE WALL AND FLAT BED

The rotary side wall machine, shown below, prints with Flexographic inks, on open end containers at 4,000 pieces an hour. Openings may be straight, tapered, flared or flanged.

The Cosomatic flat bed printer prints objects with either Flexographic or letter press inks. On some jobs, output of 30,000 pieces an hour is attained with automated feeds.

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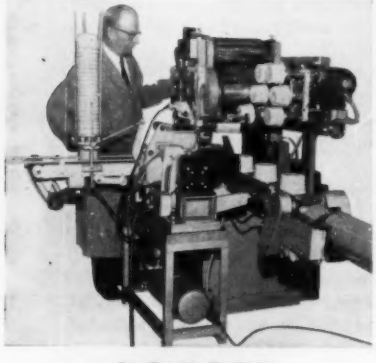


COSOM
Engineering Corp. Mfrs.
6030 Wayzata Boulevard
Minneapolis 16, Minnesota

MARKEM
Machine Co., Nat'l Distrbs.
Keene, New Hampshire

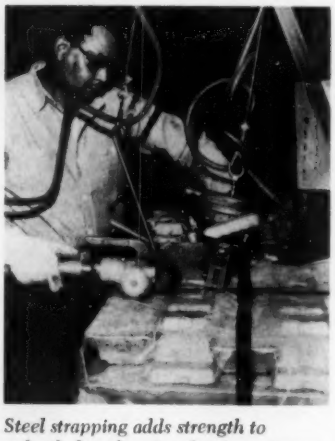
aging problems. A cookie package that appears to suspend its contents in air, a fold-up fractional pack and a spiral peel-away cylinder of individually wrapped cookies scored highest in the judging of work done by 49 students. The judging was a critique of students' work rather than a contest.

The suspension system, used by Raymond Kern of the Philadelphia Museum College of Art, is based on a cellophane sling that holds the cookies away from the overwrap and tray sections of a fractional package. The fold-up pack, which can be rack displayed without folding, was designed by William Dobias of Illinois Institute of Technology. Basis of the package is an oblong sheet of paperboard, economically die cut into three strips and folded back and forth to allow the four fractional packs to be tucked between the folds and held securely. The peel-away cylinder package designed by Frank Mahood of Carnegie Institute peels down in much the same manner as a grease pencil. It holds 20 individually wrapped jumbo-sized cookies, specially designed for school lunch use where individual wrapping assures freshness.

In the Crowell Carton design contest, students were provided a set of specifications concerning a hypothetical development of a new carton to contain 1 lb. of instant mashed potatoes. Winner of the first award, a $100 savings bond, was William Bern, a junior at Wayne State University. Elizabeth Garrington, a junior at Michigan State University won the second award of a $50 savings bond. Third award of a $25 savings bond went to Deana Bardy, a Wayne State University senior. Ten merit awards were given. The judges—William Betts of General Foods, Harry Bull of Dow Chemical, Sam Shire of Kalamazoo Vegetable Parchment and Alf Nelson of Crowell Carton—commended the students on the quality of entries, the evidence of unique creativity and originality in their designs. The contest was aimed at stimulating interest and awareness among students to opportunities present in graphic arts generally and, more particularly, as this creative endeavor relates to the packaging industry. ●

Aluminum ingots shipped in film

A combination of king-size 20-mil polyethylene bags and steel strapping is being used at Kaiser Aluminum & Chemical Corp. plants to assure customer companies of neat, clean and moisture-free delivery of aluminum ingots. Kaiser points out that the low-cost, protective bulk package also permits customers to store the metal outdoors without danger of weather damage, thereby effecting a saving on valuable indoor storage space.



Steel strapping adds strength to polyethylene bag for aluminum ingots, a low-cost, protective bulk package.

The packaging operation is swift and simple. At Kaiser reduction plants, the ingots are stacked and bagged. Then 1¼-in. steel strapping is applied crosswise over the polyethylene-bagged bundle and tightened with a pneumatic hand tool. The result: a snug, shippable bulk package which reportedly can withstand all of the normal transportation hazards.

During the packaging operation, the film bag is pulled down over the stacked ingots and folded underneath the stack. It is not heat sealed closed. Kaiser reports that the absence of a heat-sealed closure allows air to circulate through the film package, thus preventing condensation from forming inside the film bag and damaging the metal during shipment or storage.

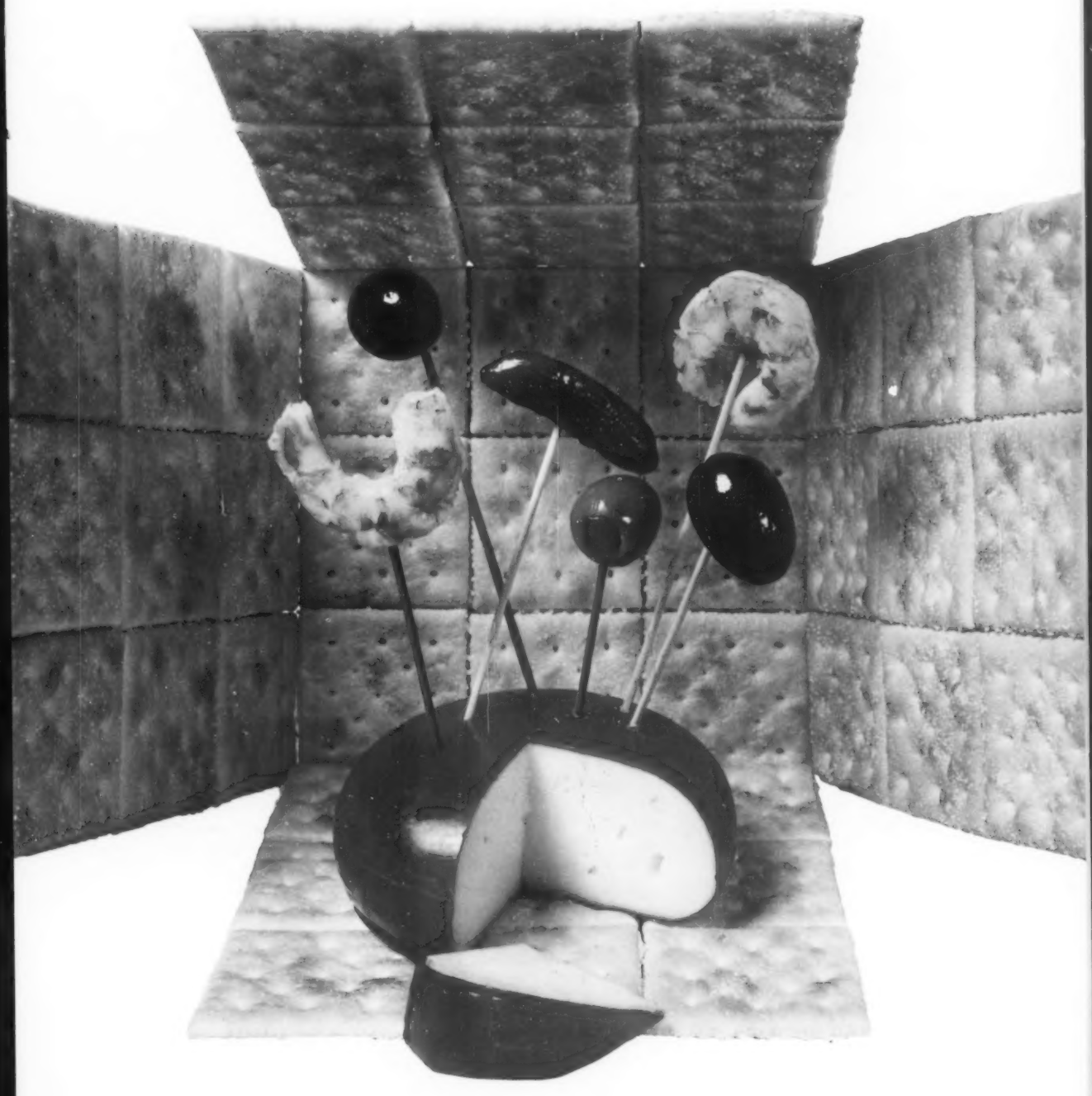
SUPPLIES AND SERVICES: Polyethylene film by Union Carbide's Visking Co. Div., 6733 W. 65 St., Chicago 38, and Gering Products, Kenilworth, N.J. Steel strapping by Signode Steel Strapping, 2600 N. Western Ave., Chicago 47. ●

CRISP AND APPETIZING

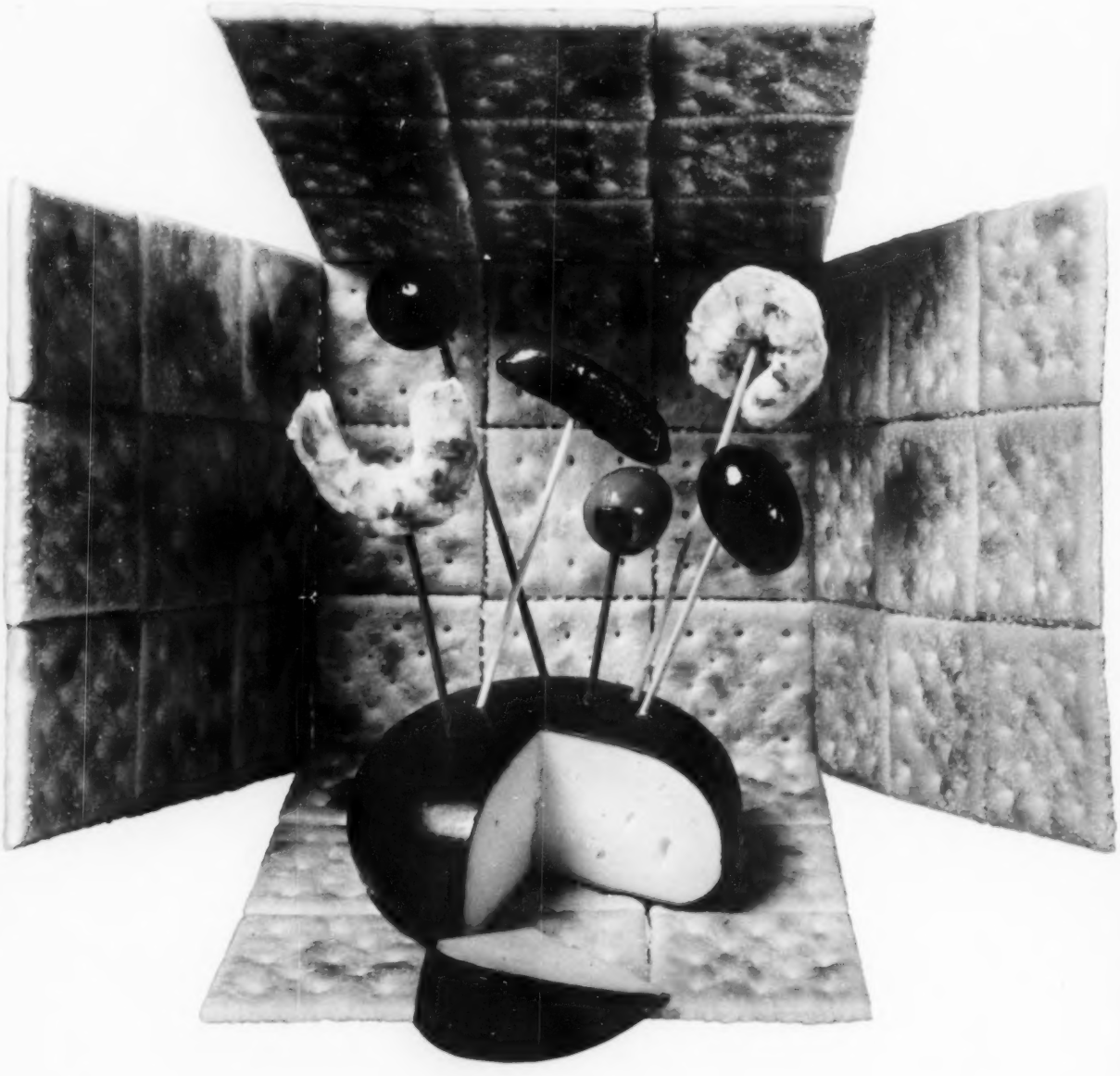
describes the printed reproduction as well as the crackers! And suggests the superiority of full-color food illustrations on coated boxboard using Dow Latex. On the next page are good reasons why coatings with Dow Latex help sell both package and product.

LATEX COATED

DOW | LATEX COATED BOXBOARD



DOW | COATINGS



LATEX COATED BOXBOARD

brings food illustrations to life . . . to create extra sales

When it comes to reproducing food illustrations, the use of Dow Latex in the boxboard coating makes the sales-winning difference!

The front of this insert, printed on .012 pt. coated boxboard, shows how coatings with Dow Latex help you meet the demand for boxboard packages with more eye appeal, improved gloss that keeps packages fresh looking longer. Moreover, these coatings give boxboard a superior printing surface. And they make possible heavier coating weights or higher machine speeds and faster drying.

Whether you're making the boxboard package itself or buying it, you'll find coatings made with Dow Latex add an over-all look of quality that creates sales for you. It will pay you to get the full details. Write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Coatings Sales Department 1931.

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EQUIPMENT • SUPPLIES • SERVICES

POLYETHYLENE FILM. 14-page catalog contains specifications, order information, yield charts and formulas on available general, application engineered, high impact and specialty polyethylene films. Chippewa Plastics Co., Div. of Rexall Drug and Chem. Co. (E-050)

CUSTOM DESIGN LABELS. 8-page illustrated catalog describes custom label design service, creative and printing facilities. Shipping, advertising, pressure-sensitive labels in various sizes, shapes and color. Ever Ready Label Corp. (E-051)

LEATHERETTE PACKAGING CONTAINERS. One-page illustrated brochure describes line of leatherette packaging containers, suitable for various items such as small tools, cutlery, food, games, cigarettes, etc. Custom made to specifications, containers designed for re-use. De Luxe Craft Mfg. Co. (E-052)

MOLDED POLYETHLENE TANKS AND DRUMS. 40-page illustrated catalog brochure describes line of molded polyethylene drums and tanks in various sizes ranging from five gallons to 160 gallon capacities. Rectangular or cylindrical, designed for storage, compounding and mixing. Prices and specifications. Delaware Barrel & Drum Co. (E-053)

PACKAGING EQUIPMENT. 4-page illustrated brochure describes line of equipment designed for measuring, weighing and sealing such items as popcorn, potato chips, etc., in transparent flexible packaging bags. General Packaging Equipment Co. (E-054)

PORTIONING & TIMING EQUIPMENT. 8-page brochure describes an electronic interval timer for controlling filling equipment, heat sealing machines, laboratory testing, etc. Also described is an electronic portioner designed for dispensing and filling liquids. C. W. Logeman Co. (E-055)

TABLET CLEANER, INSPECTION MACHINE. One-page illustrated brochure describes machines designed to clean dusty tablets prior to inspection and subsequent packaging operations at speeds up to 1½ million tablets per day. The Lakso Co., Inc. (E-056)

NEW PACKAGE CUSHIONING. 8-page illustrated catalog folder describes line of cushioning material made from polystyrene beads, designed as an interior cushioning medium to protect articles from shock and vibration during transportation and handling. Specifications and data. Armstrong Cork Co. (E-057)

POLYETHYLENE TUBE FILLING AND SEALING MACHINE. 12-page brochure describes machines designed for filling and sealing plastic tube packages of food products, cosmetics, lubricants, adhesives, pharmaceuticals, etc. Specifications. Packaging Machinery Div., A. & M. Tool & Die Co., Inc. (E-058)

STRAPPING & MATERIALS HANDLING EQUIPMENT. Small 52-page handbook describes line of strapping equipment and materials in categories of automation steel binder, strap binder, bulk binder, wire binder and tape binder, etc. A. J. Gerrard & Co. (E-059)

LITHOGRAPHIC PRINTING ON ALUMINUM FOIL. 20-page booklet provides information for lithographers in handling aluminum foil jobs, semi-technical data on selection, storage, handling, etc. Latest development in inks, coatings, preparation techniques. Anaconda Aluminum Co. (E-060)

CARBONATED BEVERAGE CANS. 12-page folder provides technical data, describes features of cans suitable for the canning of carbonated soft drinks. Tables, charts, specifications and data. American Can Co. (E-061)

AIR & LIFT TABLES. 4-page folder describes features of air and lift tables designed for easy station-to-station movement of paper, film, foil, board packs, etc. For use with other processing and handling equipment. The Clark-Aiken Co. (E-062)

PORTABLE INKING MACHINE. Two-page illustrated brochure describes a method of uniformly coating hand transfer rollers which uniformly transfer the color to the work. Conforming Matrix Corporation. (E-063)

EXTRUSION OF FILM FOR PACKAGING. 12-page technical bulletin summarizes commercial techniques for extruding polyethylene into film for packaging. Features results of study to determine effect of various conditions of extrusion on film properties. Eastman Chemical Products, Inc. (E-064)

CARDBOARD CORE CUTTER. 2-page brochure describes machinery designed to produce uniformly accurate cardboard cores with cleancut edges at predetermined lengths. Specifications. Cameron Machine Co. (E-065)

SHEET STOCK TESTING INSTRUMENTS. 12-page brochure illustrates and describes thickness micrometers, burst strength testers, and basis weight scales for testing various physical and mechanical properties of papers, tissues, films, foils, boards, etc. Prices. E. J. Cady & Co. (E-066)

CAN IMPRINTER. 2-page brochure describes machinery designed for imprinting on filled or empty cans, ¼ pt. to 1 gal. with or without ears. Handles double chine cans, pressure cans, adaptable to special end cans. Specifications. Charles Beck Machine Corp. (E-067)

DRY PROCESS FILM LAMINATOR. 6-page folder describes features of machine designed for lamination process by cementing, with heat and pressure, cellulose acetate film to any product made of paper or cardboard, Haas Laminator Corp. (E-068)

EXTRUDED VINYL FOR PACKAGING. 16-page catalog describes features of extruded vinyl film suitable for transparent packaging of such items as textiles, paper products, hard goods, novelties, toys, food products, etc. Specifications. Goodyear Tire & Rubber Co. (E-069)

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COOKIE PACKAGING MACHINE. 2-page illustrated catalog sheet describes features, gives specifications of a machine designed for the stacking and packaging of such items as sandwich cookies, up to 50 wraps per minute. Specifications. Hudson Sharp Machine Co. (E-070)

PREFORMED MOLDED FIBRE. A 24-page booklet describes properties, special features, applications of cellulose fibres made in combination with synthetic resin additives. Can be molded to various shapes and sizes, and possesses dimensional stability and strength. Hawley Products Co. (E-071)

CARTONING AND CASE PACKING. 20-page illustrated folder describes the machinery and equipment designed for cartoning and case packing of such items as beverages, drugs, foods, and sundries, and other items. R. A. Jones & Co., Inc. (E-072)

FILLING MACHINERY AND EQUIPMENT. 8-page illustrated brochure describes features and applications of a line of machinery and equipment designed for such things as pressure vacuum filling, bottle cleaning, aerosol charging, filtering, lid dropping. Specifications. Karl Kiefer Machine Co. (E-073)

PLASTIC PACKAGING SUPPLIES. 40-page directory gives geographical listing of plastic packaging molders and extruders in the United States, listed in alphabetical order. Plastics Div., Koppers Co., Inc. (E-074)

LIFT RACK STORING EQUIPMENT. 4-page brochure discusses materials handling techniques for warehouse planning through use of hand and powered lift racks and stacking equipment. Lewis-Shepard Products, Inc. (E-075)

GUMMED SEALING TAPES. 8-page folder describes features of kraft sealing tapes and reinforced tapes for use in loading, handling and closure of cartons. Specifications. Mid-States Gummed Paper Div., Minnesota Mining & Mfg. Co. (E-076)

CONTAINER FILLING MACHINERY AND EQUIPMENT. 2-page illustrated catalog sheet describes features and applications of 10-station filling machine designed for filling glass, paper or prepack containers. The Pfaudler Co. (E-077)

AERATED CONTAINERS. 8-page folder describes features and uses of seamless aluminum aerosol containers designed for pressure packaging of such items as drugs, cosmetics, pharmaceuticals, toiletry and food products. Peerless Tube Co. (E-078)

HOT MELT ADHESIVE EXTRUDER. 2-page catalog sheet describes features of extruder designed for use in the application of hot melt adhesives. Potdevin Machine Co. (E-079)

BENCH LABELLING MACHINE. 4-page catalog describes features of machine designed for label application to various shapes in glass, boxes, cartons, books, etc. Pneumatic Scale Corp., Ltd. (E-080)

RUBBER PLATE CYLINDERS. 6-page brochure describes features of rubber plate cylinder system for application to rotary letterpress and flexo-gravure presses. Mosstype. (E-081)

TAG PRESS. 2-page catalog sheet describes features of a shipping and merchandise tag designed for printing and cutting of shipping and merchandise tags. New Era Manufacturing Co. (E-082)

SIX-PACK BEVERAGE CARTON. 4-page folder describes features of new carton to provide greater visibility of beer cans for packaging in six-pack cartons. Packaging Corp. of America. (E-083)

ROLL LEAF MARKING EQUIPMENT. 6-page illustrated catalog folder describes features and applications of both hand and power operated presses and other accessories used in leaf marking and stamping processes. Olsenmark Corp. (E-084)

FILLING AND STOPPERING MACHINES. 12-page catalog describes features of machinery and equipment designed for automatic powder and/or liquid filling and stoppering of glass containers or vials. Specifications. Perry Industries, Inc. (E-085)

SLIP AND FRICTION TESTER. 2-page data sheets describe construction and features of a slip and friction testing unit. Testing Machines, Inc. (E-086)

MOUNTING AND LABELLING ADHESIVES CAPS. 12-page technical data sheets describe industrial adhesives used for lay-flat mounting, labeling and similar related applications. Union Paste Co. (E-087)

PAPERS FOR LABEL AND LINING APPLICATIONS. 6-page brochure describes features of quality papers for labeling and lining for packaging operations. Specifications. West Va. Pulp & Paper. (E-088)

GRAVURE, OFFSET, LETTERPRESS PRINTING PAPERS. 4-page brochure describes features, qualities of coated paper suitable for printing by gravure, offset, letterpress and other media. Wyomissing Paper Products, Div. of Narrow Fabric Co. (E-089)

FIBREBOARD CONTAINERS. 4-page illustrated folder describes line of fibreboard containers and tubing in various shapes and sizes. Specifications. Cleveland Container Co. (E-090)

CARTON GLUE-SEALER. 16-page illustrated folder describes various machines designed to "tuck-in" ends, seal cartons of assorted shapes and sizes. Container Equipment Corporation. (E-091)

UNIT PACKAGING. 6-page illustrated data sheets describe rotary-wrapping, continuous motion, automatic packaging machine that makes, fills and seals containers from various types of flexible materials. Conapac Corp. (E-092)

ROLL-LEAF IMPRINTING ATTACHMENT. 4-page catalog sheets describe features of roll-leaf imprinting and coding attachments designed for use with wrapping and bag-making machines. Gottschc. (E-093)

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To reduce costs and increase production, a specially designed PMC Automatic Rotary Capping Machine was installed. This machine feeds the spouts from a random bulk supply, accurately aligns and then screws them onto the filled, plastic bottles. Torque is precisely controlled to avoid distortion of the plastic threads. Production speeds are as high as 120 bottles per minute. Labor costs? Only part-time supervision is required for the capping operation.

•

If your product requires plastic spouts or any other "problem" closures, PMC can help you. Just call or write for further information.

PMC INDUSTRIES
293 Hudson St., Hackensack, N.J.
Diamond 2-3684

Keeping pharmaceutical tablets dry

A desiccant capsule that rides in the package with the product is the device by which Anahist Research Laboratories achieves effective, long-term humidity protection for a new uncoated tablet.

Dehumidifying capsule is packed in the bottle to preserve potency of uncoated Super Anahist tablets.

Anahist (a division of Warner-Lambert Pharmaceutical Co.) ran up against the humidity-protection problem when it developed an improved-formula Super Anahist tablet for symptomatic relief of colds, sinus congestion and hay fever. It was apparent that the uncoated tablets, which it is believed will replace the company's coated tablets, would require a moisture absorbent in the package to protect the product against the damaging effects of environmental humidity.

The cylindrical silica-gel capsule adopted by Anahist is said to be dropped into each 12-, 20- or 32-tablet bottle before filling it. Two are used in 40-tablet bottles. It is apparent that the desiccant capsule acts as a dehumidifier to prevent chemical decomposition and dilution of product potency that might otherwise occur on prolonged exposure of the uncoated tablets to humidity in the atmosphere.

Although the capsule is harmless if accidentally swallowed (reportedly it has been approved by the Food & Drug Administration), care is taken to insure that it is not mistaken for a tablet. Because the desiccant capsule is at the bottom of the bottle, it cannot be the first item removed. The white color and cylindrical shape of the capsule—as opposed to the blue color and disk shape of the tablets—also is a deterrent to accidental consumption. Bold copy printed in red on the capsule identifies it as a dehumidifying agent and contains the instructions: "Do not eat; keep in bottle." Further identification and explanation appear in a promotional leaflet accompanying each bottle. •

The supermarket: what's happening?

[*Continued from page 89*]

successful brands, do in such a case? That question perhaps may be best answered by noting that one out of every 10 persons at P & G is engaged in research—much of it devoted to packaging developments intended to keep the company a step ahead of its competition.

Eventually, packagers will have to take into account some basic changes in the economic status and culture of the average supermarket shopper.

Market Planning Corp. concludes that the *average* family income during the '60s will climb to $10,000 (in today's dollars)—higher than that of six out of seven families today. Discretionary income (what's left after necessities are paid for) will almost double.

These discretionary dollars will be in the hands of a large segment of the population which E. B. Weiss, director of merchandising, Doyle, Dane, Bernbach, Inc., calls the "sophisticated shopper."

There are signs that these shoppers, better educated and possibly surfeited with over-communication, are beginning to rebel against the dodging and bumping of pushcarts, waiting from 5 to 15 min. for their turn at check-out. Sophisticated shoppers apparently no longer look upon this kind of shopping as entertainment; it has become a chore. They are rebelling against stores that are too big. The consequence, it is pointed out, may be a trend back to the smaller specialty shop—or shopping by telephone and from catalogs, or through in-home sellers.

Today's shoppers buy in split seconds—and their lack of brand loyalty stems from a blasé attitude

hi-fax®

Key to a "JOYful" Container

"JOY" containers are molded by Continental Can Company, Owens-Illinois Glass Co., and Plax Corporation.

Hi-fax, Hercules high-density polyethylene, is more than an outstanding plastic material. It is a new tool which provides package designers with a material matching their most imaginative concepts. These new "Joy" bottles are a case in point. Modern in appearance, they attract attention on the shelf. And they offer the housewife all the advantages that can be provided by this new plastic material.

Hi-fax containers are unbreakable . . . they can be molded in eye-catching shapes, in appealing colors . . . they are dent-proof, will not scratch sinks or counters, discolor, rust or corrode.

To the production man, Hi-fax offers an equal number of advantages. Economically competitive with metal, Hi-fax bottles are lightweight and reduce shipping and handling costs.

Whether you design, package or sell, Hi-fax may hold the key to your present and future packaging requirements. Call on Hercules for help with your packaging problems.

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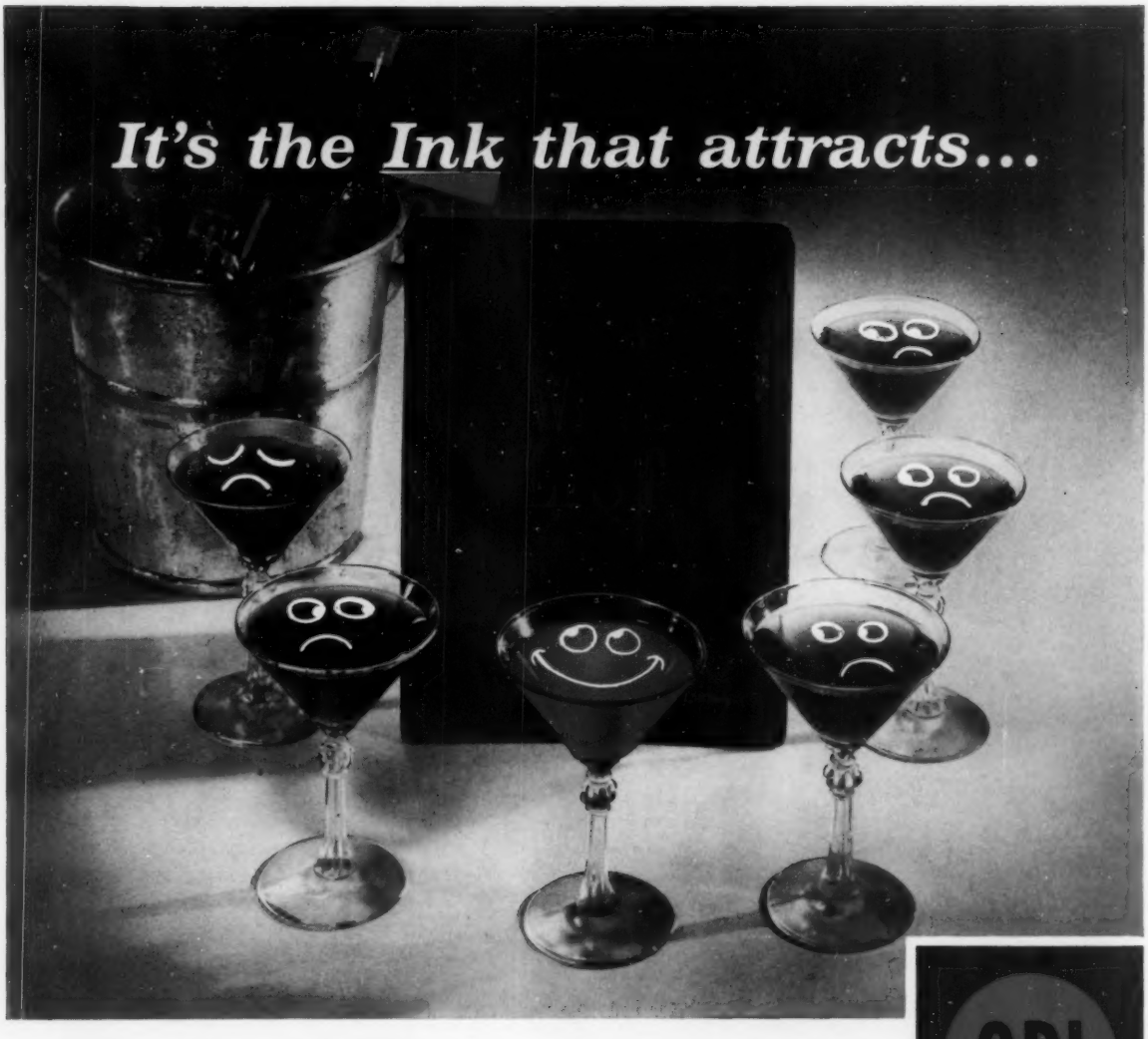

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PRINTING INKS can add the zest and sparkle to your product, package or promotion that will make it the toast of the town. They can supply the sort of scintillating spirit that sends sales soaring, making all your mornings' after in the market place merry.

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And if it's *reds* that you are particularly interested in we've got them all, from *Applejack* to *Zinfandel*. Or, say the word and we will brew one especially for you. Why not give us a try—simply call or write:

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Branches in all principal cities

GENERAL PRINTING INK

DIVISION

Sun Chemical Corporation

750 Third Avenue, New York 17, N. Y.

that most rival brands are about the same anyway. They have accepted convenience foods—from instant coffee to instant potatoes—yet their sophistication makes them more apt to welcome a larger selection of menu specialties.

Charles G. Mortimer, chairman of General Foods, may still be dead right in his recent wistful statement announcing discontinuance of the G. F. Gourmet line: "As tastes, incomes and the standard of living rise, it may be that the Gourmet Foods experiment was less than a decade ahead of its time." Maybe it won't be that long. George A. Hormel & Co. with its recent introduction of a canned line called "Famous Foods of the World" already seems to be starting something similar to what General Foods tried. And there are others—not only canned, but among the frozen foods.

The sophisticated viewpoint, says Mr. Weiss, seems to be upgrading the whole quality of American life. He cites as evidence the trends to two-home ownership, swimming pools in the back yard, a family boat in the marina, foreign travel as a measure of social status.

The variety and department stores have already recognized the trend with trade-up policies to match the upgrading of income and taste for quality goods in quality packages.

In the hurly-burly mix-up of merchandising, the supermarket—to retain its leadership in the food business—may be next to adopt trade-up merchandising. Packagers had better prepare for this big new phase of change in retail economics. ●

Container outlook

New gains in 1960 for both the production and consumption of paper and paperboard are prodicted in a recent report by *The Value Line Investment Survey*. At the same time, generally favorable prospects for the entire container industry are anticipated.

Estimates are for a gain of 6% in paper-industry volume to cap last year's 11% advance. Shipments of metal and glass containers should show further gains and earnings are expected to rise modestly as unit volume expands. The paper-container industry is reported in the survey as having "superior long-range growth prospects." ●

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  Monochrome or multicolor designs may be faithfully and permanently reproduced by the Peerless Process of Roll Leaf Marking. Submit your problem to us.

The Peerless Process of Roll Leaf Marking produces engraved and embossed results at printing speeds, in a wide range of colors including gold and silver. Peerless manufactures its own marking machinery to meet your plant requirements. Write for a free useful sample of Peerless Roll Leaf Marking and a copy of Peerless Folder PL54.

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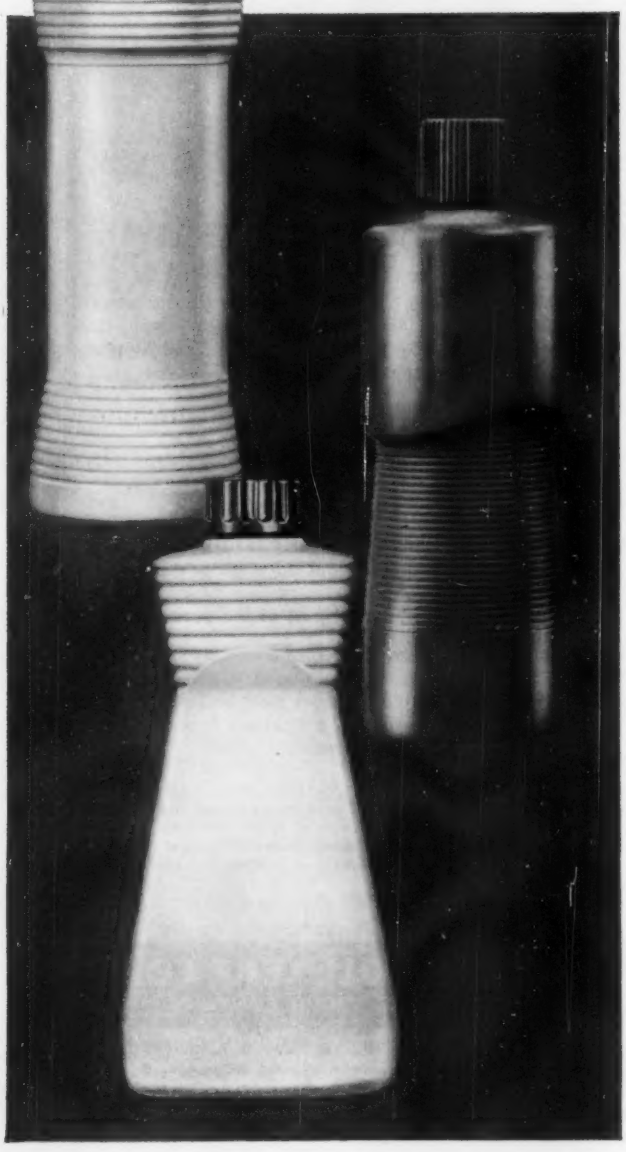
CONTINENTAL OFFERS YOU PLASTIC BOTTLE SUPPLY FROM 3 NEW PLANTS!



Now is the time to change your packaging to plastic bottles. Consumers really want these handy, colorful new packages—it's because of their tremendous popularity that Continental is expanding its bottle facilities from **one** plant to **four,** with one objective in mind: the making of **better** plastic bottles in bigger numbers. Located across the country, new plants in Baltimore, Cincinnati and Los Angeles will join the Chicago plant in producing the widest variety of molded shapes possible, bringing you plastic bottles of every size, color and design, speeding your orders, and hurrying your deliveries. In short, all the skills and savings that make Continental the leader in packaging make it your best bet for plastic bottles! Call or write for information today.

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wrap-ade HIGH SPEED UNIT PACKAGER

TABLETS- up to 800/MINUTE

Typical Fin Seal Package

Model UPH

The Unit Tablet Packager operates at speeds up to 800 tablets per minute on four row machines. Interchangeable feed tracks are available to accomodate different size tablets.

FEATURES:

- Photo registry on one or both sides of package
- Printer for coding
- Easily opened package — tear notches optional
- Tablets touch only stainless steel and hard nickel plate

Other models of Wrap-Ade Unit Packagers are available for packaging: Liquids, Powders, Soft Goods, Food Products, Hardware and other flat products under 1" thick.

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Send us a sample of your product today for our prompt quotation.

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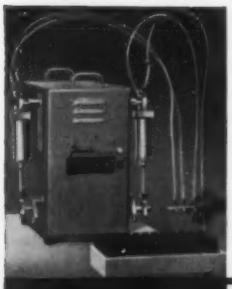
NOW—FILL ANY LIQUID WITH THE NEW Filamatic LIQUID FILLER

Fills Free-Flowing, Viscous and Foaming Liquids!



- Completely portable—ready to use on any bench top
- 1, 2, or 4 nozzles—speeds up to 120 per minute
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Solve your filling problems with the new Filamatic—the **only** portable, volumetric filler that handles all liquids. Provides drip-free filling of water-thin products, heavy oils, viscous adhesives or foaming lotions. Fills polyethylene bottles, glass or metal containers. Single drop to 16 oz. capacity increases to 2½ gallons with Multi-Stroke Attachment. Write today for new 12 page brochure. . . .

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Saves its cost in months!

NEW MOSSTYPE "MOUNTER-PROOFER"®

Rubber Plate Set-Up and Proofing Machine

Increase printing press productivity by *preproofing* every job — in color — before you place it on the press. The "Mounter-Proofer" enables you to mount rubber plates on cylinders faster, more accurately — and, simultaneously, to take composite or progressive proofs under press-related impression squeeze. Saves precious press-time, costly stock and ink—provides new control over quality.

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Solve your Difficult Marking problems

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HOT STAMPING PRESSES

Kensol Presses are available in three pressure ranges: Light-Weight, Medium-Weight, and Heavy-Duty.

The proper model is available to meet any production requirements: Hand-operated, Air-operated, Semi-Automatic & Completely-Automatic.

Compressed air operation adjustable electric dwell-timer, thermostatic heat control and rugged construction are a few of the features which assure fine quality marking.

KENSOL 15T
Light-Weight
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Fine quality, economically priced roll leaf in genuine gold, imitation gold and silver, and both flat and Enamel pigment colors.

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Specialists in Quality Marking Equipment and Supplies for over 30 years

Perfect For So Many Handling Needs... The Completely Different

ECON-O-LIFT*
BUCKET ELEVATOR & CONVEYOR

To Convey All Materials Including:
- Tea, Candy, Cookies, Fruit
- Chemicals, Powders, Drugs
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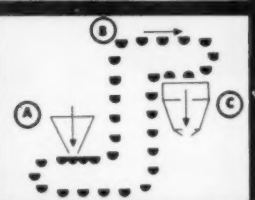
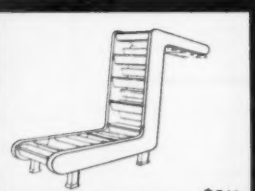
Exclusive operating features permit the ECON-O-LIFT to perform many conveying jobs that other conveyors simply CANNOT do. It's ideal for rapid, economical handling of bulk loads or small components without breakage, marring or dusting . . . to elevate, lower or transfer materials—even liquids and semi-liquids.

Illustration (right) shows how the exclusive ECON-O-SPACER action (A) moves spaced trays TIGHTLY together into interlocking bank at loading point. No spillage is possible between trays. Only simple dump loading is required. Trays resume spaced relation (B) and remain spaced and upright at all times . . . even on turns. At unload point or points (C), trays turn upside-down for COMPLETE dumping, then quickly return to horizontal position for travel.

For many valuable ideas on how the ECON-O-LIFT can perform smoother, more economical handling in YOUR plant, send coupon now for free, illustrated manual.





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Irradiated film

[*Continued from page 126*]

previously resulted from ice-packed shipment made over long distances. The film's toughness and flexibility at low temperatures have made possible the successful shipment of fresh-frozen poultry in overwrapped tray packs over thousands of miles and stacked in mass display in supermarket freezer cases.

Frankfurters. L film's high shrink and exceptional sealing qualities not only produce an exceptionally attractive frankfurter package, but have made possible high-speed automatic packaging of frankfurters in a tight, attractive and tough consumer package (Figures 6-7) at moderate cost. More than 100 different frankfurter packers are now using this type of package.

Bakery products. While this is a small market at present due to the lack of fully automatic equipment needed for high-speed operations, it is growing healthily. Commercial acceptance of the shrink cover to date is excellent.

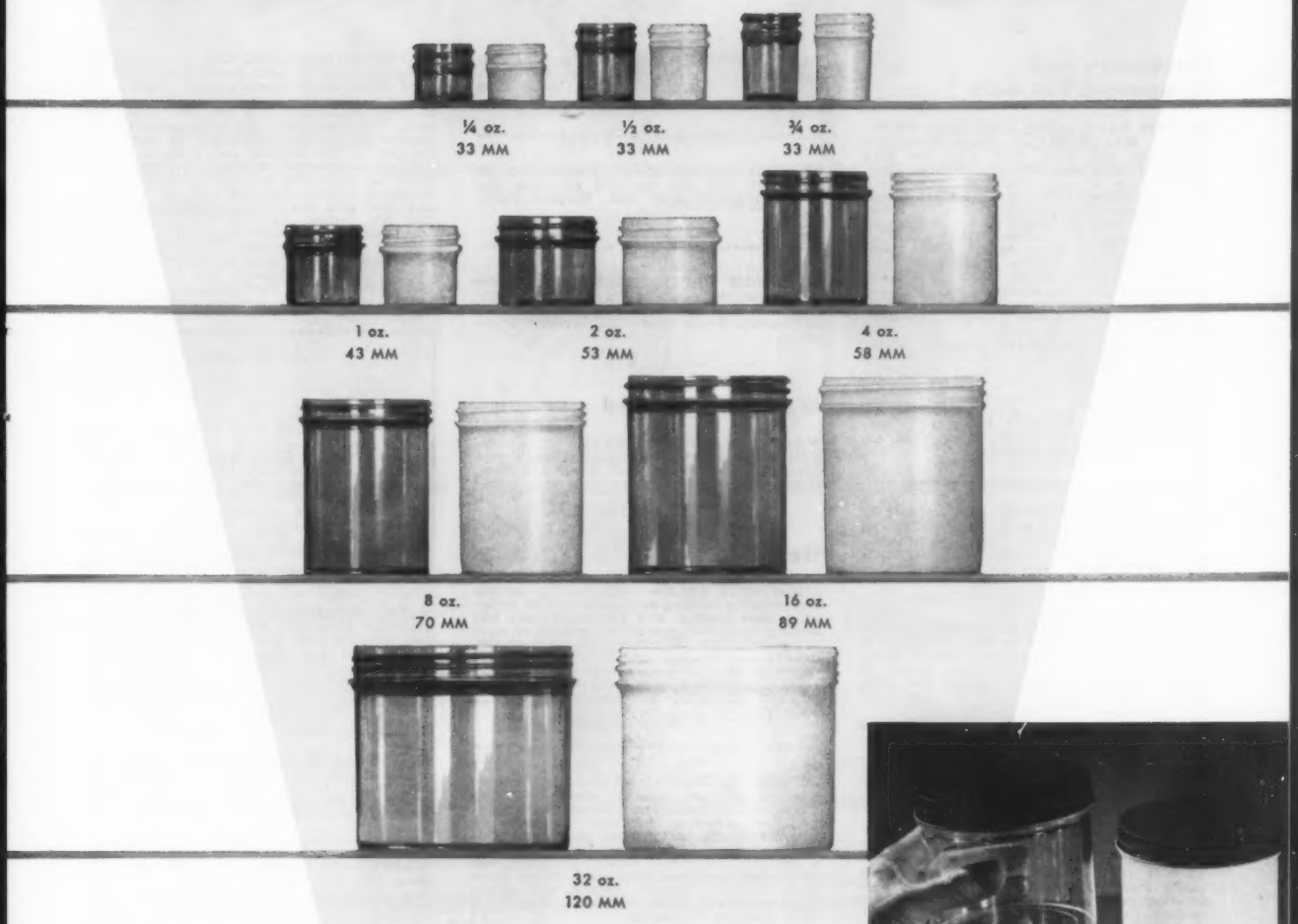
Fruits and vegetables. This market has just been opened with the shrink-sleeve package for fruits. It is expected that 1960 will see a large growth in this packaging concept. The twist-tie package is still to be proved, but it is being tested in one or two chains in the East.

Household products. Cryovac's engineers and development personnel are carefully evaluating dozens of potential uses, from strips of buttons that are virtually surrounded by film when shrunk by hot air, to record covers that need a high-slip film for a clear, glossy cover.

Uses for this new film are being explored wherever a strong, clear, glossy film can be used to provide a skin-tight fit for greater product visibility and protection against the rigors of marketing. ●

CORRECTION: On p. 145 of the March issue, in the article "Approaching the Single Wall," polyethylene-coated cartons used by Schrafft's were incorrectly identified. As correctly shown in the original article on Schrafft's in September, 1959, these cartons are manufactured by the Continental Folding Box Co., Ridgefield, N. J., using a polyethylene-coated board produced by the Lowe Paper Co., also of Ridgefield. ●

CELLUPLASTIC
SQUAT JARS



A Complete Line.....
Competitively Priced

Whether you are selling soothing salves or fine powders, solder flux or cosmetic cream, the Clearsite squat jar is your answer to better packaging and lower shipping costs. Available from stock in nine sizes in clear polystyrene or linear polyethylene. Can also be molded in a wide range of colors to meet special requirements. Any design can be beautifully reproduced in our large and experienced multi-color printing plant. Standard closures available for all sizes.

Here's an attractive line of competitively priced jars that weigh about one-fifth the weight of glass jars of equivalent capacity. You benefit **three** ways: **better packaging, less breakage, lower shipping costs.** Write for samples and prices—Address Dept. 549.

YOUR PACKAGING PROBLEMS END AT CELLUPLASTIC

THE NEW 32 OUNCE PLASTIC JAR

This big beautiful 32 ounce jar has all kinds of packaging possibilities in linear polyethylene with overflow capacity of 32.3 fluid ounces—weight 211 pounds per thousand; or clear polystyrene with overflow capacity of 33.8 fluid ounces —weight 212 pounds per thousand. Either jar takes a standard 120 mm closure.

CELLUPLASTIC CORPORATION

24 Commerce St., Newark, N. J.

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Business Opportunities
Used or Resale Equipment

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MODERN PACKAGING AND FOOD PROCESSING MACHINERY—Package Machinery Model FA, FF, FFH, FA2, FA3 and FA4 Wrappers with and without Electric Eyes, also Models F and CM2. Hudson Sharp Campbell Models 2W6, 2W8 and 2W10 Wrappers. Hayssen Wrappers, all sizes, for cellophane and polyethylene. Package Machinery Palmer Carton Gluers and Traylocks TLA and TLB. Wrap King Model DW-4 with Electric Eye and Marker. Pneumatic Scale Automatic Carton Feeder, Bottom Sealers, Wax Liners and Top Sealing Units with interconnecting conveyors. Pneumatic Scale Tite Wrap Machine and Liners. Transwrap Machine, Model B with 4 scale Net Weigher, Model A Auger, Triangle Model L-1 with Scales. Ceco Models 40 and A3901-12 Cartoning Machines. Packaging Machinery Models F10 and F10-J Bundlers. Standard Knapp, Ferguson, A-B-C Case Sealers. Fillers, Labelers, Cappers, Mixers, Grinders. Union Standard Equipment Company, 318 Lafayette Street, New York 12, N. Y. Phone: CAnal 6-5334.

SIMPLEX CELLOPHANE BAG MAKING MACHINE—Equipped with Electric Eye. In good operating condition. Immediately available. Great sacrifice. Reply Box 1237, Modern Packaging.

OLIVER WRAPPING MACHINE—#799-T. 6¾" to 14¾" long, 5½" to 10½" wide, ⅛" to 4¼" high. Wrapper rolls from 6" to 23" wide. For operation on 3/60/220 A.C. Speed 20 to 36 packages per minute. Reply Box 1238, Modern Packaging.

WEB OFFSET, two unit with shear cut slitter and rewinder; 25" maximum width, 17½" repeat. Also sheets. Speed to 625 ft. per minute. Bought new, used 2 years. Reply Box 1239, Modern Packaging.

LYNCH ROBO-WRAP MODEL 101-C Automatic Packaging Machine. Has 5/16" perforating punch device, special center seam sealers for polyethylene & electric eye. Conveyor equipped with carrying containers and indexing drive synchronized with the Robo-Wrap. Excellent condition. Sterling Plastics Co., 1140 Commerce Ave., Union, N.J.

Machinery Wanted

MANUFACTURER'S REPRESENTATIVE—looking for a line of overwrap machinery, labelers or allied equipment. Presently covering the New York metropolitan area and New England. Calling on all accounts where packaging machinery is used. Please reply to Box 1234, Modern Packaging.

WANTED—28 inch by 41 inch model 6 Thomson Die Press; Taber Thermocreaser model 123, and a S. & S. Wrapper model BNS with 405 gluer. Give serial number, condition and price in your reply. E. & A. Gunther Company Limited, Brantford, Ontario.

WANTED—Used Heating Sealing machines to make pouches and bags—Simplex No. 7-24 and No. 8. Must be in good operating condition. Give all details as to condition and attachments in machine in first letter. Replies sent to Mr. John M. Robinson, Package Designing & Mfg. Corp., 859-879 Summer Ave., Newark 4, N.J.

TABER THERMOBEADERS, either single or duplex. Must be in good working order, with or without Beading Dies. Reply Box 1241, Modern Packaging.

WANTED—Acetate Clear Transparent in Rolls .002, .003, .004, and .005, any size, any quantity. Reply Box 1242, Modern Packaging.

EUROPEAN FIRM REQUIRES offers for high capacity cone cup making machinery, new and/or rebuilt. Give full and illustrated particulars. Reply Box 1243, Modern Packaging.

Materials Wanted

WANTED—ACETATE, BUTYRATE, POLYETHYLENE Sheet Trim. Also Molding Scrap. Claude P. Bamberger, Inc., Ridgefield Park, N.J. HUbbard 9-5330.

Help Wanted

EQUIPMENT SALES—High volume agency representing leading manufacturers of wrapping, case sealing, and automatic poly bag sealing machines wants representative covering Delaware, Maryland, District of Columbia and Virginia on exclusive basis. No objection to allied non-competing lines. Send resume including area covered and lines presently handled to Box 1225, Modern Packaging.

JUNIOR SALESMAN—Nationally known prestige Midwest plastics sheet and film extruder has immediate opening for an aggressive salesman between 25 and 40. Thermo plastic background preferred. Midwest territory. Opportunity for a man with a college background. Salary, incentive; car and travel expenses furnished. Other company benefits. Submit resume and salary requirements in strict confidence. Reply Box 1226, Modern Packaging.

MANUFACTURER'S AGENT—A couple of desirable territories in Midwest still available on complete line of Cellophane, Polyethylene, Foil, etc., converted into Multicolor printed Rolls, Sheets, Bags, Pouches. Can supplement your existing income providing not conflicting; commissions only. In answering, list present lines, experience, areas covered. Write Box 1227, Modern Packaging.

PACKAGING PERSONNEL
Positions filled and secured. A confidential Nationwide Service for employers seeking personnel and individuals seeking new positions. Inquiries invited. Reply to Graphic Arts Employment Service. Est. 1952. Helen M. Winters, Manager: Dept. PAC-5, 307 East 4th Street, Cincinnati 2, Ohio. Phone CHerry 1-2201.

PACKAGING SALESMAN—For converter of cellophane, polyethylene, and other packaging materials. Excellent opportunity for experienced man. Office and plant located in midwest. Submit resume—will be held in confidence. Reply Box 1229, Modern Packaging.

TECHNICAL DIRECTOR—The flexible packaging division of well-diversified, medium sized Midwestern manufacturer requires a technical director to enable it to continue to forge ahead with new creative packaging ideas. The right man will have considerable experience in manufacturing or technical services in the flexible packaging industry and be capable of assuming the responsibility for supplying manufacturing with the technical help it requires and for product and processes development. Good opportunity for further advancement as well as participation in ownership of company through stock purchase plan. All replies confidential. Please send full resume of experience, accomplishments and education to Box 1228, Modern Packaging.

PACKAGING ARTIST—Aggressive recognized leader in the flexible packaging field is interested in artists desiring a career in this field. Contact us if you possess the following: *Desire for responsibility. *Have experience in B/W Art. *Have a good sense of design. *Are an expert in lettering. *Know Typography. *Know Color Separation. Challenging position with advancement opportunities for the right person. Exceptional working conditions. Location Midwest. Salary commensurate with experience and ability. For more details write Box 1230, Modern Packaging, stating age, experience and salary desired.

WELL ESTABLISHED GROWING CALIFORNIA Film Converter has openings in Los Angeles and San Francisco areas for experienced and successful salesmen. Permanent representation with attractive remuneration features. Please send complete resume to Box 1231, Modern Packaging. Our employees are aware of this advertisement.

HIGH QUALITY POLYETHYLENE Film extruder wants repr. selling clear and colored film in rolls to large users in various industries. Castco, Inc., 36-32 34th St., Long Island City, 6 NY. Tel: ST-6-1953.

WANTED—Representative in Detroit-Toledo Area. Mid-West converter desires representative to sell complete line of flexible packaging products including printed cellophane, poly, and foil rolls, sheets and bags in area partially established. Prefer an established representative already calling on trade with an allied line. Replies held in strict confidence. Reply Box 1235, Modern Packaging.

PACKAGE DESIGN MANAGER—Should be professional member of Packaging Institute with a degree in Marketing or the equivalent in experience. Will report to General Manager Consumer Products Marketing. Responsible for integrating element of packaging in the marketing programs of consumer products. Will work closely with Brand Management, Market Research, Manufacturing, Planning, Purchasing, Budget and Legal Departments. Should be knowledgeable in all phases of packaging: materials, equipment, design, etc. Beginning salary commensurate with ability. Write giving complete details of education and experience and salary desired. All replies will be kept confidential. Address replies to: Personnel Procurement, Kimberly-Clark Corporation, Neenah, Wisconsin.

WANTED—by midwest plastic molder who has just recently gone into production on new line of aerosol overcaps. Manufacturers Representatives qualified to sell contract aerosol fillers and manufacturers in the cosmetic, drug, and food fields. Give territories covered, related lines, and other particulars. Write Box 1236, Modern Packaging.

(Continued on page 230)

A-C® Polyethylene

CARTON COATINGS OFFER 7-WAY PROTECTION

- No more fiber scratch
- Improved scuff resistance
- Higher chemical resistance
- High grease resistance
- Better gloss
- Moisture resistance
- Reduced rub-off

Allied Chemical

If grease, moisture or fine finishes present packaging problems for your product, here's how you can pack and ship them safely *without recourse to costly carton liners:*

Incorporate A-C Polyethylene into your present carton-coating operation! It will eliminate fiber scratch and scuffing, give your cartons adequate resistance to grease, water and chemicals.

A-C Polyethylene can save you money, too. When you add it to ordinary wax coatings, *penetration is drastically reduced,* resulting in less wax consumption. For example, with straight paraffin, the normal coating weight is 7-8 lbs./1000 sq. ft. With addition of A-C Polyethylene, *it is frequently reduced to 3-5 lbs./1000 sq. ft. with superior protection!*

Write for literature, free samples. Free samples and technical data are now ready for your evaluation. Just write us at the address below. Or ask your local Semet-Solvay representative for a demonstration in your own plant. He can show you, right on your own equipment, how A-C Polyethylene can improve your cartons, save you money at the same time! *Contact us for the names of processors in your area who make up blends of A-C Polyethylene and wax.*

SEMET-SOLVAY PETROCHEMICAL DIVISION

Dept. 574-L, 40 Rector Street, New York 6, N. Y.

National Distribution • Warehousing in Principal Cities

(Continued from page 228)

REPRESENTATIVES WANTED for leading converter of barrier pouches, barrier paper, rubberized hair, molded rubberized hair, desiccant, and other allied Military and Commercial packaging products. Representatives must have familiarity with government packaging specifications. Allied, non-competitive lines can be carried. Most territories available. Send resume, other details, area covered, in first letter. Replies sent to Mr. John M. Robinson, Package Designing & Mfg. Corp., 859-879 Summer Ave., Newark 4, N.J.

PACKAGING SPECIFICATIONS—Pharmaceutical Company in the Philadelphia area has need for an aggressive young college graduate with several years experience in packaging and/or packaging specifications. Please send resume and salary desired to Personnel Dept., Wyeth, Box 8299, Phila. 1, Pa.

SALESMAN—to cover Metropolitan New York Area. Conveyors and allied packaging machinery. Established accounts. Must be experienced in equipment sales to drug, aerosol, food and bottling accounts. Salary and bonus over quota. Island Equipment Corp., 135-20 39th Avenue, Flushing 54, New York.

SALES MANAGER—For Blow Molded Products in new rapidly expanding division covering consumer, packaging and industrial products. Must have imagination, initiative, plastics experience and proven sales ability. Location—Southern Connecticut. Write for interview enclosing resume and present salary to: T. F. Anderson. Haveg Industries, Plastics Park, 900 Greenbank Road, Wilmington 8, Delaware.

Situations Wanted

DIRECTOR OF PACKAGING—40 year old executive with 15 years in the packaging field seeks challenging position in the Chicago area. Experience includes boxboard and plastics converting, package development, and packaging machinery sales engineering. M.E. graduate. Available in 30 days. Reply Box 1233, Modern Packaging.

PACKAGING COORDINATOR AVAILABLE—Packaging Coordinator now employed by one of our clients (major marketer of packaged goods with annual sales over $500,000,000) seeks a new connection. Our client knows of this ad. Excellent Packaging, Administrative, Marketing backgrounds. Early thirties, married. Please address inquiries to: Associated Industrial Designers, 95 Madison Ave., N. Y. C.

PACKAGE DESIGN DIRECTOR—who does not believe in design "for art's sake," but in "design-to-produce-sales" (coordinated with a marketing program) wants to put creative idea design to work for a company or packaging supplier. N.Y. Metropolitan area. Salary $14,000 range. Reply Box 1244, Modern Packaging.

Miscellaneous

ROTOGRAVURE PRINTING PLANT WANTED—Company now in Packaging Business. Interested in acquiring rotogravure printing plant. Amenable to cash or a stock transaction. Send replies to Box 1232, Modern Packaging.

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MANUFACTURERS REPRESENTATIVE Wanted—Packaging products and materials for sales in expanding southern California market. Emphasis on plastics. Opening new office in Los Angeles. Extensive packaging sales and management experience. Well acquainted with volume package buyers. Strong creative ability. Reply Box 1245, Modern Packaging.

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ALL CLASSIFIED ADVERTISEMENTS PAYABLE IN ADVANCE OF PUBLICATION

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For purpose of establishing rate, figure approximately 50-55 words per inch.

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Our skilled craftsmen are available to help solve your particular packaging problem from start to finish. We will welcome the opportunity to discuss this with you.

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79-95 PENNSYLVANIA AVENUE, ELMIRA, N. Y.

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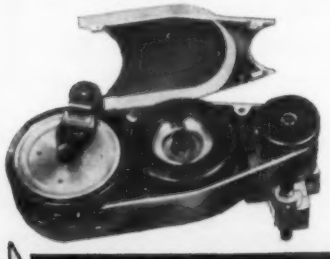

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*Porelon is a trade-marked product of S. C. Johnson & Son, Inc.

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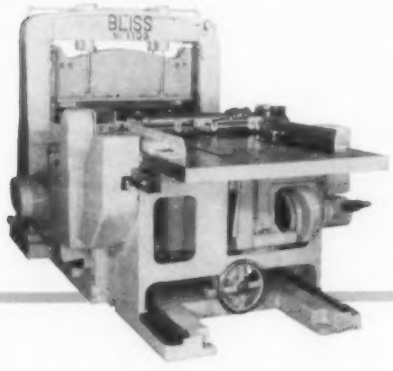

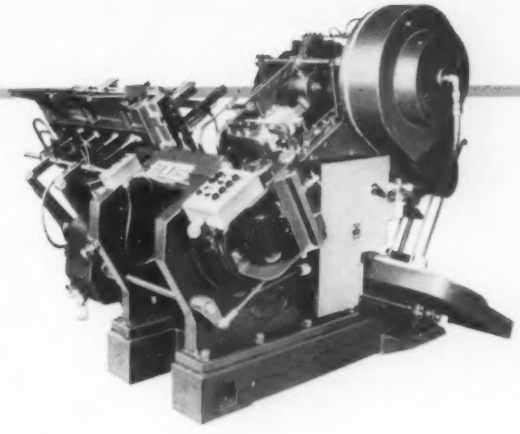

High speed #1831 Strip Feed Press blanks and forms can ends up to 404 diameter in double dies. Speeds range from 250 to 325 s.p.m. producing up to 600 or more ends a minute.

You can end CAN END production problems with these Bliss machines

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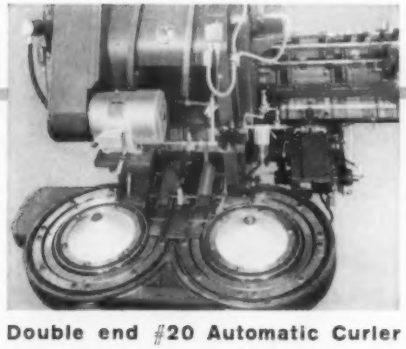

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These machines incorporate many refinements in designs that have been thoroughly proved in production over the last four years. Write today for detailed information.

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A BREDEN PUBLICATION

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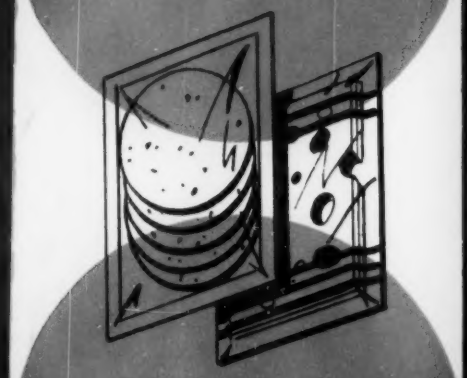
Battle Creek, Michigan



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Metallic Labels

Margarine And Butter Wraps

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